**Supplementary Table I**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Protein N.** | **Protein description** | **NCBI ID** | **UniProt AC\*** | **GB ID** | **Gene name** | **Methodology** | **Journals** | **Comments** |
| **1** | A disintegrin and metalloproteinase with thrombospondin motifs 13 | NP\_620595.1 | **Q76LX8** | 21265043 | **ADAMTS13**  **ADAM-TS13** | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **2** | Acid ceramidase | NP\_808592.2 | Q13510 | 189011548 | ASAH1  ASAH | 1D-Western Blot/Immunohistochemistry | Eliyahu R *et al*., 2010 | Expressed in CCs (Eliyahu *et al*., 2010);  Levels of this enzyme are positively correletad with embryo quality (Eliyahu *et al*., 2010);  Expressed at all stages of oocyte maturation and may be essential for oocyte survival and maturation (Eliyahu *et al*., 2010). |
| **3** | Actin, cytoplasmic 1 | NP\_001092.1 | P60709 | 4501885 | ACTB | 2DE/LC-MS/MS | Twigt J *et al*., 2012 | Stimulates follicle stimulatin hormone (FSH) secretion by the pituitary gland (Corrigan *et al*., 1991). |
| **4** | Activin: A = inhibin beta A chain x 2  Activin B = inhibin beta B chain x 2  Activin AB = inhibin beta A chain+inhibin beta B chain  Inhibin beta A chain  Inhibin beta B chain | NP\_002183.1  NP\_002184.2 | P08476  P09529 | 4504699  154813204 | Activin A  Activin B  Activin AB  INHBA**¥**  INHBB | ELISA; EIA; Two-site enzyme immunoassay | Wen X *et al*., 2006; Luisi S *et al*., 2003; Klein NA *et al*., 2000 | Belong to trasforming growth factor  superfamily (Knight *et al*., 2012);  Antagonizes by inhibin, which acts by blocking activin binding to its receptors and by follistatin, which forms complexes with activin extracellularly preventing activin availability (Knight *et al*., 2012). |
| **5** | Acyl-CoA synthetase family member 4  (Aminoadipate-semialdehyde dehydrogenase; Ambekar AS *et al*., 2013) | NP\_861522.2 | Q4L235 | 45580730 | AASDH | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **6** | Adipocyte plasma membrane-associated protein | NP\_065392.1 | **Q9HDC9** | 24308201 | APMAP  C20orf3 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **7** | Adiponectin | NP\_004788.1 | Q15848 | 4757760 | ADIPOQ  Adiponectin | ELISA | Gutman G *et al*., 2009 | Causes an increase in insulin-like growth factor-1 and induced steroid release by human GCs (Chabrolle *et al*., 2009);  May up-regulate AMH (Merhi *et al*., 2013);  High levels are associated with better outcomes in assited reproductive cycles (Michalakis *et al*., 2010);  Upregulatethe expression of Bmp2 in CCs (Richards *et al*., 2012). |
| **8** | ADM  [Cleaved into: Adrenomedullin  Proadrenomedullin N-20 terminal peptide] | NP\_001115.1 | P35318 | 4501945 | ADM  Adrenomedullin | RIA | Balasch J *et al*., 2004; Marinoni E *et al*., 2002; Manau D *et al*., 2000 |  |
| **9** | ADP-ribosyl cyclase 2 /cyclic ADP-ribose hydrolase 2 | NP\_004325.2 | **Q10588** | 168229159 | BST1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **10** | Adrenocortical dysplasia protein homolog | NP\_001075955.1 | Q96AP0 | 130978956 | ACD  PTOP | CE-MALDI ToF/ToF MS | Hanrieder J *et al*., 2009 |  |
| **11** | Advanced glycosylation end product-specific receptor | NP\_001127.1 | Q15109 | 10835203 | AGER  RAGE | Luminex xMAP technology | Bonetti TC *et al*., 2013 | Its intrafollicular concentration negatively correlated with embryo quality in ICSI (Bonetti *et al*., 2013). |
| **12** | Afamin | NP\_001124.1 | P43652 | 4501987 | AFM  Afamin | 2DE/MALDI ToF MS; Nano-LC-MS/MS; 2DE/LC-MS/MS; CE-MALDI ToF/ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Hanrieder J *et al*., 2009; Angelucci S *et al.*, 2006 | Correlated to IVF outcome (Kushnir *et al*., 2012);  May exert a key role in steroidogenesis (Hanrieder *et al*., 2009);  Some isoforms are more abundant in HFF than in HP (Angelucci *et al*., 2006). |
| **13** | Aggrecan core protein | NP\_037359.3 | **P16112** | 256017257 | ACAN  Aggrecan | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **14** | Alkaline phosphatase, tissue-nonspecific isozyme | NP\_000469.3 | P05186 | 116734717 | ALPL | Nano-LC-MS/MS | Kushnir MM *et al.*, 2012 |  |
| **15** | Alpha-catulin | NP\_003789.1 | Q9UBT7 | 4503129 | CTNNAL1 | CE-MALDI ToF/ToF MS | Hanrieder J *et al*., 2009 |  |
| **16** | Alpha-enolase | NP\_001419.1 | P06733 | 4503571 | ENO1 | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **17** | Alpha-N-acetylglucosaminidase | NP\_000254.2 | **P54802** | 66346698 | NAGLU  ANAG | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **18** | Alpha-1-acid glycoprotein 1  (Orosomucoid; Kushnir MM *et al.*, 2012) | NP\_000598.2 | P02763 | 167857790 | AGP1  AGP1(ORM1) | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/MALDI ToF MS; Nano-LC-MS/MS; 2DE/LC-MS/MS; CE-MALDI ToF/ToF MS | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Hanrieder J *et al*.,2009 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  It binds thyroid hormone at low affinity (Benvenga *et al*., 2002). |
| **19** | Alpha-1-acid glycoprotein 2 | NP\_000599.1 | P19652 | 4505529 | ORM2  AGP2 (ORM2) | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/MALDI ToF MS; Nano-LC-MS/MS; 2DE/LC-MS/MS; CE-MALDI ToF/ToF MS | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Hanrieder J *et al*., 2009 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Correlated to IVF outcome (Kushnir *et al*., 2012). |
| **20** | Alpha-1-antichymotrypsin  (Serpin peptidase inhibitor, clade A, member 3; Kushnir MM *et al.*, 2012) | NP\_001076.2 | P01011 | 50659080 | SERPINA3  SERPINA3 (ACT) | 2DE/MALDI ToF MS; Nano-LC-MS/MS; 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS; PF2D Protein Fractionation-LC MS/MS | Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Jarkovska K *et al*., 2010; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008; Angelucci S *et al.*, 2006 | Upregulated in HFF with respect to HP (Jarkovska *et al*., 2010);  Some isoforms are more abundant in HFF than in HP (Angelucci *et al*., 2006). |
| **21** | Alpha-1-antitrypsin | NP\_000286.3 | P01009 | 50363217 | SERPINA1  Alpha-1-antitrypsin | 2DE/MALDI ToF MS; Nano-LC-MS/MS; 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS; Seldi Tof/MS; 2DLC/MALDI ToF MS | Bianchi L *et al*., 2013; Lo Turco EG *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Jarkovska K *et al*., 2011; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008; Angelucci S *et al.*, 2006; Schweigert FJ *et al*., 2006 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Correlated to IVF outcome (Kushnir *et al*., 2012);  Some isoforms are more abundant in HFF than in HP (Angelucci *et al*., 2006);  It binds thyroid hormone at low affinity (Benvenga *et al*., 2002);  The presence is correlated with the maturity of the oocyte (Nagy *et al*., 1989);  Upregulated in patients affected by OHSS (Jarkovska *et al*., 2011);  Found in non pregnancy patientswith endometriosis (Lo Turco *et al*., 2013). |
| **22** | Alpha-1B-glycoprotein | NP\_570602.2 | P04217.4  (P04217) | 21071030 | A1BG  Glycoprotein Ib-alpha | 2DE/MALDI ToF MS; Nano-LC-MS/MS; 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS; 2DLC/MALDI ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Jarkovska K *et al*., 2011; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Correlated to IVF outcome (Kushnir *et al*., 2012). |
| **23** | Alpha-2-antiplasmin  (Alpha-2-plasmin inhibitor; Kushnir MM *et al.*, 2012) | NP\_000925.2 | P08697 | 115583663 | SERPINF2 | 2DE/MALDI ToF MS; Nano-LC-MS/MS; 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS | Bianchi L *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Hanrieder J *et al*., 2008; Angelucci S *et al.*, 2006 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Correlated to IVF outcome (Kushnir *et al*., 2012);  Some isoforms are more abundant in HFF than in HP (Angelucci *et al*., 2006). |
| **24** | Alpha-2-HS-glycoprotein | NP\_001613.2 | P02765 | 156523970 | AHSG  Fetuin-A | 2DE/MALDI ToF MS; Nano-LC-MS/MS; LC-MS/MS; Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS; 2DLC/MALDI ToF MS; 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Lo Turco EG *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Yoo SW *et al*., 2011; Jarkovska K *et al*., 2011; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008; Angelucci S *et al*.,2006 | Correlated to IVF outcome (Kushnir *et al*., 2012);  Some isoforms are more abundant in HFF than in HP (Angelucci *et al*., 2006). |
| **25** | Alpha-2-macroglobulin | NP\_000005.2 | P01023 | 66932947 | A2M  (PZP) | 2DE/MALDI ToF MS; Nano-LC-MS/MS; LC-MS/MS; CE-MALDI ToF/ToF MS; /LC-MS/MS; 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Yoo SW *et al*., 2011; Hanrieder J *et al*., 2009; Angelucci S *et al*.,2006 | Some isoforms are more abundant in HFF than in HP (Angelucci *et al*., 2006). |
| **26** | Aminopeptidase N | NP\_001141.2 | **P15144** | 157266300 | ANPEP  CD13 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **27** | Amphiregulin  (AR) | NP\_001648.1 | **P15514** | 4502199 | **AREG**  **Amphiregulin** | ELISA | Liu N *et al*., 2012; Humaidan P *et al*., 2011; Zamah AR *et al*., 2010; Inoue Y *et al*., 2009 | It is the most abundant EGF receptor ligand (Inoue *et al*., 2009);  Higher concentration in HFF than HP (Inoue *et al*., 2009);  Induced in GCs LH, forskolin, FSH and PGE2 (Inoue *et al*., 2009);  Its concentration is negativelely related to oocyte quality, FR, pregnancy outcome and exogenous hCG (Inoue, 2009) (Nagata *et al*., 1999);  HCG increases AR and AR increases the expression of the transcription factor *Runx1* (Jo *et al*., 2006). |
| **28** | Amyloid beta A4 protein | NP\_000475.1 | P05067 | 4502167 | APP | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **29** | Angiogenin | NP\_001136.1 | P03950 | 4557313 | ANG  Angiogenin | 2DE/LC-MS/MS; Western Blot; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; ELISA; EIA; Chemiluminescent enzyme labeled immunometric assay | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012; Kawano Y *et al*., 2003; Malamitsi-Puchner A *et al*., 2003; Malamitsi-Puchner A *et al*., 2001; Koga K *et al.*, 2000 | May play an important role in follicular growth and development (Kawano *et al*., 2003);  Its concentration positively correlated with that of progesterone and its production is upregulated by hCG and hypoxia (Koga *et al*., 2000). |
| **30** | Angiopoietin-1 | NP\_001137.2 | Q15389 | 20532340 | ANGPT1  Angiopoietin-1 | ELISA | NishigakiA *et al*., 2011B | Its concentration in FF decreased with the enlargment of follicle. In preovulatory patients it is absolutely more abundant in serum than in FF (Nishigaki *et al*., 2011B). |
| **31** | Angiopoietin-2 | NP\_001138.1 | O15123 | 4557315 | ANGPT2  Angiopoietin-2 | ELISA | Nishigaki A *et al*., 2011B | Its concentration in FF increased with the enlargment of follicle. In preovulatory patients it is more abundant in FF than in serum (Nishigaki *et al*., 2011B). |
| **32** | Angiotensin-converting enzyme | NP\_000780.1 | **P12821** | 295844837 | ACE  ACE1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **33** | Angiotensinogen | NP\_000020.1 | P01019 | 4557287 | AGT  Angiotensinogen | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/LC-MS/MS; Nano-LC-MS/MS; 2DE/MALDI ToF MS; LC-MS/MS | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013; Lo Turco EG *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Yoo SW *et al*., 2011; Kim YS *et al.*, 2006; Angelucci S *et al*., 2006; | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Down-regulated in recurrent spontaneous abortions (Kim *et al*., 2006);  Some isoforms are more abundant in HFF than in HP (Angelucci *et al*., 2006);  Found in pregnancy patients with endometriosis (Lo Turco *et al*., 2013);  Found in non pregnancy patients with endometriosis (Lo Turco *et al*., 2013). |
| **34** | Ankyrin repeat domain-containing protein 18A | NP\_671728.2 | **Q8IVF6** | 283549153 | **ANKRD18A** | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **35** | Ankyrin repeat domain-containing protein 36C | XP\_003118905.1 | **Q5JPF3.3**  **(**Q5JPF3) | 310118968 | **ANKRD36C** | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **36** | Anoctamin-8 | NP\_066010.1 | Q9HCE9 | 55741655 | ANO8  TMEM16H | CE-MALDI ToF/ToF MS | Hanrieder J *et al*., 2009 |  |
| **37** | Antithrombin-III | NP\_000479.1 | P01008 | 4502261 | SERPINC1  Antithrombin III | 2DE/MALDI ToF MS; Nano-LC-MS/MS; 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS; PF2D Protein Fractionation-LC MS/MS; LC-MS/MS | Bianchi L *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Jarkovska K *et al*., 2010; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008; Kim YS *et al.*, 2006; Angelucci S *et al*.,2006 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Correlated to IVF outcome (Kushnir *et al*., 2012);  Upregulated in HFF with respect to HP (Jarkovska *et al*., 2010);  Down-regulated in recurrent spontaneous abortions (Kim *et al*., 2006);  Some isoforms are more abundant in HFF than in HP (Angelucci *et al*., 2006). |
| **38** | APC membrane recruitment protein 3 | NP\_001098665.1 | **Q8N944** | 157427661 | AMER3  FAM123C | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **39** | Apolipoprotein (a) | NP\_005568.2 | **P08519** | 116292750 | LPA  APOLPA | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **40** | Apolipoprotein A-I | NP\_000030.1 | P02647 | 4557321 | APOA1 | 2DE/MALDI ToF MS; Nano-LC-MS/MS; Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS; LC-MS/MS; 2DE/LC-MS/MS; 2DE/MALDI ToF MS; 2DLC/MALDI ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013*;* Kushnir MM *et al*., 2012; Twigt J *et al*., 2012; Yoo SW *et al*., 2011; Jarkovska K *et al*., 2011; Von Wald T *et al*., 2010; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008; Angelucci S *et al*.,2006; Lee HC *et al*., 2005 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  It protects the oocyte from oxygen-free radicals (Von Wald *et al*., 2010);  Some isoforms are less abundant in HFF than in HP (Angelucci *et al*., 2006);  Plays antioxidant effect protecting the oocyte from toxic injury, improving fertilization potential (Von Wald *et al*., 2010);  Acts in concert with HDL-cholesterol within the HDL particle to influence embryo morphology (Browne *et al*., 2008). |
| **41** | Apolipoprotein A-II | NP\_001634.1 | P02652 | 4502149 | APOA2 | 2DE/MALDI ToF MS; Nano-LC-MS/MS; 2DE/LC-MS/MS; CE-MALDI ToF/ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Hanrieder J *et al*., 2009; Angelucci S *et al*.,2006; Lee HC *et al*., 2005 | Correlated to IVF outcome (Kushnir *et al*., 2012);  Some isoforms are more abundant in HFF than in HP (Angelucci *et al*., 2006). |
| **42** | Apolipoprotein A-IV | NP\_000473.2 | P06727 | 71773110 | APOA4 | 2DE/MALDI ToF MS; 2DE/LC-MS/MS; LC-MS/MS; Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS; LC-MS/MS; PF2D Protein Fractionation-LC MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013; Lo Turco EG *et al*., 2013; Twigt J *et al*., 2012; Yoo SW *et al*., 2011; Jarkovska K *et al*., 2011; Jarkovska K *et al*., 2010; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008; Angelucci S *et al*.,2006; Lee HC *et al*., 2005 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Upregulated in HFF with respect to HP (Jarkovska *et al*., 2010);  Some isoforms are more abundant in HFF than in HP (Angelucci *et al*., 2006);  Upregulated in patients affected by OHSS (Jarkovska *et al*., 2011). |
| **43** | Apolipoprotein B-100  (Apolipoprotein B (including Ag (x) antigen) Ambekar AS *et al*., 2013;) | NP\_000375.2 | P04114 | 105990532 | APOB | Nano-LC-MS/MS; 2DE/LC-MS/MS; LC-MS/MS; immunoturbidimetric method; 2DE/MALDI ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Yoo SW *et al*., 2011; Gautier T *et al*., 2010; Von Wald T *et al*., 2010 | Expressed by GCs (Gautier *et al*., 2010);  ApoB levels are positively correletaded with embryo quality and pregnancy rate (Gautier *et al*., 2010);  It is upregulated in HFF than in HP (Von Wald *et al*., 2010). |
| **44** | Apolipoprotein C-I | NP\_001636.1 | P02654 | 4502157 | APOC1 | 2DE/MALDI ToF MS; Nano-LC MALDI ToF/ToF MS; LC-MS/MS | Bianchi L *et al*., 2013; Yoo SW *et al*., 2011; Hanrieder J *et al*., 2008 |  |
| **45** | Apolipoprotein C-II | NP\_000474.2 | P02655 | 32130518 | APOC2 | 2DE/MALDI ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013). |
| **46** | Apolipoprotein C-III | NP\_000031.1 | P02656 | 4557323 | APOC3 | 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008 |  |
| **47** | Apolipoprotein C-IV | NP\_001637.1 | P55056 | 4502161 | APOC4 | LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al*., 2011 |  |
| **48** | Apolipoprotein D | NP\_001638.1 | P05090 | 4502163 | APOD | 2DE/MALDI ToF MS; Nano-LC-MS/MS; 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Angelucci S *et al.*, 2006 | Some isoforms are more abundant in HFF than in HP (Angelucci *et al*., 2006). |
| **49** | Apolipoprotein E | NP\_000032.1 | P02649 | 4557325 | APOE | 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; LC-MS/MS; 2DE/MALDI ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012; Yoo SW *et al*., 2011; Von Wald T *et al*., 2010; Hanrieder J *et al*., 2008 | Expressed by GCs (Von Wald *et al*., 2010);  Apo E-rich HLD may influence steirodogenesis and promoting healthy oocyte maturation (Von Wald *et al*., 2010) (Dyer *et al*., 1988). |
| **50** | Apolipoprotein F | NP\_001629.1 | **Q13790** | 4502165 | APOF | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **51** | Apolipoprotein L1 | NP\_003652.2 | O14791 | 21735614 | APOL1 | 2DE/LC-MS/MS; LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012; Yoo SW *et al*., 2011 |  |
| **52** | Apolipoprotein M | NP\_061974.2 | O95445 | 22091452 | APOM | 2DE/MALDI ToF MS; LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013). |
| **53** | Arf-GAP with GTPase, ANK repeat and PH domain-containing protein 2 | NP\_001116244.1 | **Q99490.2**  **(Q99490)** | 170650694 | AGAP2  PIKE(CENTG1) | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **54** | Armadillo repeat-containing protein 2 | NP\_115507.4 | **Q8NEN0** | 148762963 | ARMC2 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **55** | Armadillo repeat-containing protein 8 (Unnamed protein product 1: C-fragment of ARMC8) | NP\_056211.2 | Q8IUR7 | 32526896 | ARMC8 | 2DE/MALDI ToF MS | Lee HC *et al*., 2005 | May have a potential role in aminoacid metabolism during oogenesis (Lee *et al*., 2005). |
| **56** | Aryl hydrocarbon receptor nuclear translocator-like protein 1 | NP\_001025444.1 | **O00327.1**  **(O00327)** | 71852582 | ARNTL  BMAL1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **57** | AT-rich interactive domain-containing protein 4A | NP\_075377.2 | **P29374** | 115334679 | ARID4A | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **58** | Attractin | NP\_001193976.1 | O75882.2  (O75882) | 333440461 | ATRN  Attractin | 2DE/LC-MS/MS; LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **59** | Basement membrane-specific heparan sulfate proteoglycan core protein (Heparan sulphate proteoglycan 2; Kushnir MM *et al.*, 2012) | NP\_005520.4 | P98160.4  (P98160) | 126012571 | HSPG2  Perlecan | Nano-LC-MS/MS; 2DE/LC-MS/MS; PF2D Protein Fractionation-LC MS/MS; 2DE/MALDI ToF/ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Jarkovska K *et al*., 2010; Hanrieder J *et al*., 2008 | Upregulated in HFF with respect to HP (Jarkovska *et al*., 2010);  Contributes to regulation of vasculature in follicle (Zoeller *et al*., 2009). |
| **60** | Beta-Ala-His dipeptidase | NP\_116038.4 | Q96KN2 | 21071039 | CNDP1  CPGL2 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **61** | Beta-nerve growth factor | NP\_002497.2 | **P01138** | 70995319 | NGF | ELISA | Sadeu JC *et al*., 2012 | It is produced by GCs and TCs (Dissen *et al*., 2009);  Highly expressed in PCOS patients (Dissen *et al*., 2009);  Plays an important role in follicle development, steroidogenesis and oocyte maturation (Sadeu *et al*., 2012). |
| **62** | Beta-1,3-galactosyl-O-glycosyl-glycoprotein beta-1,6-N-acetylglucosaminyltransferase 4 (Glucosaminyl (N-acetyl) transferase 4, core 2) | NP\_057675.1 | **Q9P109** | 7706127 | GCNT4  C2GNT3 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **63** | Beta-2-glycoprotein 1 | NP\_000033.2 | P02749 | 153266841 | APOH  Beta-2-glycoprotein I (APOH) | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/MALDI ToF MS; 2DE/LC-MS/MS | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013; Twigt J *et al*., 2012 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  It may stimulate human sperm motility (Aleporou-Marinou *et al*., 2001). |
| **64** | Beta-2-microglobulin | NP\_004039.1 | **P61769** | 4757826 | B2M  Beta-2-microglobulin | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **65** | Biotinidase | NP\_000051.1 | P43251 | 4557373 | BTD | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **66** | Bone morphogenetic protein 5 | NP\_066551.1 | **P22003** | 10835091 | BMP5 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **67** | Bone morphogenetic protein 15 | NP\_005439.2 | O95972 | 257743454 | BMP15 | Western Blot | Gode F *et al*., 2011; Wu YT *et al*., 2007 | Required for ovarian folliculogenesis and member of TGF-β superfamily (de Resende *et al*., 2012);  Its up-regulation positively influence the oocyte and embryo competence acquiring (Wu *et al*., 2007);  It stimulates folliculogenesis and its defects are related to hypergonadotropic ovarian failure (di Pasquale *et al*., 2004) (Kedem *et al*., 2011);  Coexpressed with GDF9 in human size and plays a fundamental role in GC steirodogenesis, ovulation, oocyte maturation and embryo development (de Resende *et al*., 2012);  BMP15: GDF9 heterodimers control ovarian physiology (Peng *et al*., 2013). |
| **68** | Brain-derived neurotrophic factor (BDNF) | NP\_733928.1 | P23560 | 25306253 | BDNF | ELISA; BDNF Emax Immunoassay System | Zhang QY *et al*., 2012; Sadeu JC *et al*., 2012; Wang X *et al*., 2011; Buyuk E *et al*., 2008; Seifer DB *et al*., 2003 | It is produced by GCs and it may have a role in the regulation and modulation of oocyte maturation (Seifer *et al*., 2002A);  Plays an important role in follicle development, steroidogenesis and oocyte maturation (Sadeu *et al*., 2012);  Down regulated in endometriosis patients (Buyuk *et al*., 2008). |
| **69** | Brain-specific angiogenesis inhibitor 1 | NP\_001693.2 | **O14514** | 111118994 | BAI1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **70** | BTB/POZ domain-containing protein KCTD4 | NP\_940686.2 | **Q8WVF5** | 146198864 | KCTD4 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **71** | Cadherin EGF LAG seven-pass G-type receptor 1 | NP\_055061.1 | **Q9NYQ6** | 7656967 | CELSR1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **72** | Cadherin-5  (Cadherin 5, type 2 (vascular endothelium) Ambekar AS *et al*., 2013) | NP\_001786.2 | P33151 | 166362713 | CDH5  VE-cadherin | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **73** | Cadherin-6  (Cadherin 6, Htype 2, K-cadherin (fetal kidney)) | NP\_004923.1 | **P55285** | 4826673 | CDH6  K-cadherin | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **74** | Cadherin-13  (Cadherin 13, H-cadherin (heart)) | NP\_001248.1 | **P55290** | 4502719 | CDH13  H-caderin | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **75** | Calmodulin-like protein 5 | NP\_059118.2 | **Q9NZT1** | 223278387 | CALML5  CLSP | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **76** | Calsyntenin-1 | NP\_055759.3 | **O94985.2**  **(O94985)** | 572427575 | CLSTN1  Calsyntenin-1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **77** | Carbonic anhydrase 1 | NP\_001729.1 | **P00915** | 4502517 | CA1  Carbonic Anhydrase 1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **78** | Carboxypeptidase B2 | NP\_001863.2 | Q96IY4 | 126273569 | CPB2 | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **79** | Carboxypeptidase N catalytic chain | NP\_001299.1 | P15169 | 4503011 | CPN1  Carboxypeptidase N (cat) | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **80** | Carboxypeptidase N subunit 2 | NP\_001073982.2 | P22792 | 256217721 | CPN2  Carboxypeptidase N (reg) | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **81** | Carboxypeptidase Z | NP\_001014447.1 | Q66K79 | 62388877 | CPZ | CE-MALDI ToF/ToF MS | Hanrieder J *et al*., 2009 |  |
| **82** | Cartilage acidic protein 1 | NP\_001193457.1 | **Q9NQ79.2**  (Q9NQ79) | 330688397 | CRTAC1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **83** | Cartilage oligomeric matrix protein | NP\_000086.2 | P49747 | 40217843 | COMP | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **84** | Catalase | P04040.3 | P04040 | 115702 | Ccbe1  CAT  Catalase | Enzymatic assay; Western Blot | Carbone MC *et al.*, 2003 | Its pattern changes during reproductive ageing and this may impair ROS scavenging efficiency in the follicular environment (Carbone *et al*., 2003). |
| **85** | Cathepsin B | NP\_001899.1 | **P07858** | 4503139 | CTSB  Cathepsin B | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **86** | Cathepsin D | NP\_001900.1 | **P07339** | 4503143 | CTSD  Cathepsin D | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **87** | Cathepsin L1 | NP\_001903.1 | P07711 | 4503155 | CTSL  Not supported by MetaCore | LC-MS/MS | Yoo SW *et al*., 2011 |  |
| **88** | C-C motif chemokine 2  (MCP-1; Lédée N *et al*., 2008; Xu H *et al*., 2006) | NP\_002973.1 | P13500 | 4506841 | CCL2 | ELISA; Multiplex sandwich immunoassay | Lédée N *et al*., 2011; Xu H *et al*., 2006; Dahm-Kähler P *et al*., 2006; Kawano Y *et al*., 2001 | May play an important role in human preovulatory processes (Kawano *et al*., 2001);  Highly expressed in patients with endometriosis (Xu *et al*., 2006). |
| **89** | C-C motif chemokine 3  (MIP-1-α; Lédée N *et al*., 2011) | NP\_002974.1 | P10147 | 4506843 | CCL3  MIP-1-alpha | Multiplex sandwich immunoassay; ELISA | Lédée N *et al*., 2011; Dahm-Kähler P *et al*., 2006 |  |
| **90** | C-C motif chemokine 4 | NP\_002975 | P13236 | 4506845 | CCL4  MIP-1-beta | Multiplex sandwich immunoassay | Lédée N *et al*., 2011 |  |
| **91** | C-C motif chemokine 5  Regulated upon activation, normal T cell expressed and secreted (RANTES) | NP\_002976.2 | **P13501** | 22538814 | CCL5 | Multiplex sandwich immunoassay; ELISA | Lédée N *et al*., 2011; Xu H *et al*., 2006 | Highly expressed in patients with endometriosis (Xu *et al*., 2006). |
| **92** | C-C motif chemokine 20 (MIP-3α) | NP\_004582.1 | P78556 | 4759076 | CCL20 | ELISA | Kawano Y *et al*., 2004 | Regulated by IL-1α and TNF-α (Kawano *et al*., 2004);  Play an important role in the human preovulatory process (Kawano *et al*., 2004);  Significantly higher in the follicular fluid containing mature oocytes (Kawano *et al*., 2004). |
| **93** | CD5 antigen-like | NP\_005885.1 | **O43866** | 5174411 | CD5L  AIM (CD5L) | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **94** | CD44 antigen (Soluble)  (sCD44) | NP\_000601.3 | P16070 | 48255935 | CD44  CD44 soluble | ELISA; RIA | Ohta N *et al*., 2001 | Its amount was higher in follicles containing oocytes that were not fertilized, and oocytes in the follicles containing a small amount of sCD44 developed into poor-quality embryos (Ohta *et al*., 2001). |
| **95** | Centromere protein F | NP\_057427.3 | P49454.2  **(P49454)** | 55770834 | CENPF  CENP-F | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **96** | Centromere protein L | NP\_201576.1 | Q8N0S6 | 58743363 | CENPL | CE-MALDI ToF/ToF MS | Hanrieder J *et al*., 2009 |  |
| **97** | Centrosomal protein of 170 kDa | NP\_001035864.1 | **Q5SW79.1**  (Q5SW79) | 109255232 | CEP170  KAB | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **98** | Centrosome-associated protein 350  (Centrosomal protein 350 kDa) | NP\_055625.4 | **Q5VT06** | 171184451 | CEP350 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **99** | Ceruloplasmin | NP\_000087.1 | P00450 | 4557485 | CP  Ceruloplasmin | 2DE/MALDI ToF MS; Nano-LC-MS/MS; 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS; 2DLC/MALDI ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Lo Turco EG *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Jarkovska K *et al*., 2011; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008; Angelucci S *et al.*, 2006 | Some isoforms are more abundant in HFF than in HP (Angelucci *et al*., 2006);  Upregulated in patients affected by OHSS (Jarkovska *et al*., 2011);  Found in pregnancy patients with endometriosis (Lo Turco *et al*., 2013). |
| **100** | Cholesterol 7-alpha-monooxygenase (CYP7A1) | NP\_000771.2 | P22680 | 166295200 | CYP7A1 | LC-MS/MS | Yoo SW *et al*., 2011 | Involved in LXR/RXR activation system (Yoo *et al*., 2011). |
| **101** | Cholinesterase | NP\_000046.1 | P06276 | 4557351 | BCHE  BChE | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **102** | Chondroadherin | NP\_001258.2 | **O15335** | 153251229 | CHAD  Chondroadherin | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 | Involved in follicular fluid formation, ECM remodelling during folliculogenesis, steroidogenesis and ovulation (Ambekar *et al*., 2013). |
| **103** | Chordin-like protein 2 | NP\_056239.3 | **Q6WN34** | 40353769 | **CHRDL2**  **CHL2** | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **104** | Chromodomain-helicase-DNA-binding protein 2 | NP\_001262.3 | **O14647.3**  **(O14647)** | 118421089 | CHD2 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **105** | Clarin-3 | NP\_689524.1 | Q8NCR9 | 22748685 | CLRN3 | Nano-LC-MS/MS | Kushnir MM *et al.*, 2012 |  |
| **106** | Claudin domain-containing protein 1 | NP\_001035290.1 | **Q9NY35** | 93588657 | CLDND1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **107** | CLK4-associating serine/arginine rich protein | NP\_008987.2 | **Q8N2M8** | 133922600 | CLASRP  SFRS16 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **108** | Clusterin | NP\_001822.3 | P10909 | 355594753 | CLU | 2DE/MALDI ToF MS; 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS; LC-MS/MS; 2DE/MALDI ToF/ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Bianchi L *et al*., 2013; Twigt J *et al*., 2012; Yoo SW *et al*., 2011; Jarkovska K *et al*., 2010; Hanrieder J *et al*., 2008; Angelucci S *et al.*, 2006 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Upregulated in HFF with respect to HP (Jarkovska *et al*., 2010);  Plays a protective role in reproduction (Jarkovska *et al*., 2010);  Some isoforms are more abundant in HFF than in HP (Angelucci *et al*., 2006). |
| **109** | Coagulation factor V | NP\_000121.2 | P12259 | 105990535 | F5  Coagulation factor V | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **110** | Coagulation factor VII | NP\_000122.1 | P08709 | 4503645 | F7  Coagulation factor VII | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **111** | Coagulation factor IX | NP\_000124.1 | P00740 | 4503649 | F9  Coagulation factor IX | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **112** | Coagulation factor X | NP\_000495.1 | P00742 | 4503625 | F10  Coagulation factor X | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **113** | Coagulation factor XI | NP\_000119.1 | P03951 | 4503627 | F11  Coagulation factor XI | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **114** | Coagulation factor XII | NP\_000496.2 | P00748 | 145275213 | F12  Coagulation factor XII | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012; Hanrieder J *et al*., 2008 |  |
| **115** | Coagulation factor XIII A chain | NP\_000120.2 | P00488 | 119395709 | F13A1  Coagulation factor XIII A | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **116** | Coagulation factor XIII B chain | NP\_001985.2 | P05160 | 110611237 | F13B | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **117** | Coiled-coil domain-containing protein 66 | NP\_001012524.4 | **A2RUB6** | 213688413 | CCDC66 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **118** | Coiled-coil domain-containing protein 162 | AAI28119 | A2VCL2.3  **(A2VCL2)** | 310115122 | **CCDC162P**  **CCDC162** | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **119** | Coiled-coil domain-containing protein 178 | NP\_945346.2 | **Q5BJE1.2**  (Q5BJE1) | 157671917 | **CCDC178**  **C18orf34** | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **120** | Collagen alpha-1(I) chain | NP\_000079.2 | **P02452** | 110349772 | COL1A1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **121** | Collagen alpha-1(III) chain | NP\_000081.1 | **P02461** | 4502951 | COL3A1  Collagen III | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **122** | Collagen alpha-1(IV) chain | NP\_001836.2 | P02462 | 148536825 | COL4A1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **123** | Collagen alpha-1(V) chain | NP\_000084.3 | **P20908** | 89276751 | COL5A1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **124** | Collagen alpha-1(VI) chain | NP\_001839.2 | **P12109** | 87196339 | COL6A1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **125** | Collagen alpha-1(XV) chain | NP\_001846.3 | P39059 | 116008152 | COL15A1 | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **126** | Collagen alpha-1(XVIII) chain | NP\_569712.2 | **P39060** | 110611233 | COL18A1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **127** | Collagen alpha-2(I) chain | NP\_000080.2 | **P08123** | 48762934 | COL1A2 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **128** | Collagen alpha-2(IV) chain | NP\_001837.2 | P08572 | 116256354 | COL4A2 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **129** | Collagen alpha-3(IV) chain | NP\_000082.2 | **Q01955** | 89142730 | COL4A3 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **130** | Collagen alpha-3(VI) chain | NP\_476505.3 | P12111.3  (P12111) | 240255542 | COL6A3 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **131** | Collagen and calcium-binding EGF domain-containing protein 1 | NP\_597716.1 | **Q6UXH8** | 39930511 | CCBE1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **132** | Collagenase 3 | NP\_002418.1 | P45452 | 4505209 | MMP13  MMP-13 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/MALDI ToF MS | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013). |
| **133** | Collectin-10  (Collectin sub-family member 10; C-type lectin); | NP\_006429.2 | **Q9Y6Z7** | 256017186 | COLEC10 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **134** | Collectin-11  (Collectin sub-family member 11) | NP\_954705.1 | **Q9BWP8.2**  **(Q9BWP8)** | 40548420 | COLEC11 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **135** | Complement C1q subcomponent subunit A | NP\_057075.1 | P02745 | 7705753 | C1QA  C1qa | LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al.*, 2013 | Supposed to be produced by granulosa cells, involved in oocyte maturation (Yoo *et al*., 2013). |
| **136** | Complement C1q subcomponent subunit B | NP\_000482.1 | P02746 | 87298828 | C1QB  C1qb | 2DE/LC-MS/MS; LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al.*, 2013; Twigt J *et al*., 2012 | Supposed to be produced by granulosa cells, involved in oocyte maturation (Yoo *et al*., 2013). |
| **137** | Complement C1q subcomponent subunit C | NP\_001107573.1 | P02747 | 166235903 | C1QC  C1qc | 2DE/LC-MS/MS; LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al.*, 2013; Twigt J *et al*., 2012 | Supposed to be produced by granulosa cells, involved in oocyte maturation (Yoo *et al*., 2013). |
| **138** | Complement C1 r subcomponent | NP\_001724.3 | P00736 | 66347875 | C1R  C1RA (MetaCore supports only the C1r B chain) | 2DE/LC-MS/MS; LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al.*, 2013; Twigt J *et al*., 2012 | Supposed to be produced by granulosa cells, involved in oocyte maturation (Yoo *et al*., 2013). |
| **139** | Complement C1 r subcomponent-like protein | NP\_057630.1 | Q9NZP8 | 289547636 | C1RL | 2DE/LC-MS/MS; LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al.*, 2013; Twigt J *et al*., 2012 | Supposed to be produced by granulosa cells, involved in oocyte maturation (Yoo *et al*., 2013). |
| **140** | Complement C1s subcomponent | NP\_001725.1 | P09871 | 41393602 | C1S | 2DE/LC-MS/MS; LC-MS/MS; Nano-LC MALDI ToF/ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/MALDI ToF MS | Ambekar AS *et al*., 2013; Yoo SW *et al.*, 2013; Twigt J *et al*., 2012; Hanrieder J *et al*., 2008; Angelucci S *et a*l., 2006 | Supposed to be produced by granulosa cells, involved in oocyte maturation (Yoo *et al*., 2013). |
| **141** | Complement C2 | NP\_000054.2 | P06681 | 14550407 | C2 | 2DE/LC-MS/MS; Nano-LC-MS/MS; LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al.*, 2013; Twigt J *et al*., 2012; Kushnir MM *et* *al.*, 2012 | Supposed to be produced by granulosa cells, involved in oocyte maturation (Yoo *et al*., 2013). |
| **142** | Complement C3 | NP\_000055.2 | P01024 | 115298678 | C3 | 2DE/MALDI ToF MS; Nano-LC-MS/MS; 2DE/LC-MS/MS; LC-MS/MS; Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS; 2DE/MALDI ToF/ToF MS; 2DLC/MALDI ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al.*, 2013; Bianchi *et al.*, 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Yoo SW *et al.*, 2011; Jarkovska K *et al*., 2011; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008; Angelucci S *et al.*, 2006 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Supposed to be produced by granulosa cells and to be involved in oocyte maturation and development (Yoo *et al*., 2013);  Some isoforms are more abundant in HP than in HFF (Jarkovska *et al*., 2010);  Some isoforms are more abundant in HFF than in HP (Angelucci *et al*., 2006);  Upregulated in patients affected by OHSS (Jarkovska *et al*., 2011). |
| **143** | Complement C4-A | NP\_009224.2 | P0C0L4 | 67190748 | C4A  C4A protein | 2DE/MALDI ToF MS; Nano-LC-MS/MS; LC-MS/MS; Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS; 2DE/MALDI ToF/ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013; Yoo SW *et al.*, 2013; Kushnir MM *et al.*, 2012; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Supposed to be produced by granulosa cells, involved in oocyte maturation (Yoo *et al*., 2013);  Correlated to IVF outcome (Kushnir *et al*., 2012);  Some isoforms are more abundant in HP than in HFF (Jarkovska *et al*., 2010). |
| **144** | Complement C4-B | NP\_001002029.3 | P0C0L5 | 178557739 | C4B  C4B protein | 2DE/MALDI ToF MS; LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013; Yoo SW *et al.*, 2013 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Supposed to be produced by granulosa cells, involved in oocyte maturation (Yoo *et al*., 2013). |
| **145** | Complement C5 | NP\_001726.2 | P01031 | 38016947 | C5 | Nano-LC-MS/MS; 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012 |  |
| **146** | Complement component C6 | NP\_000056.1 | P13671 | 4559406 | C6 | Nano-LC-MS/MS; 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012 |  |
| **147** | Complement component C7 | NP\_000578.2 | P10643 | 45580688 | C7 | LC-MS/MS; 2DE/LC-MS/MS; Nano-LC-MS/MS; LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al.*, 2013; Twigt J *et al*., 2012; Hanrieder J *et al*., 2008 | Supposed to be produced by granulosa cells, involved in oocyte maturation (Yoo *et al*., 2013). |
| **148** | Complement component C8 alpha chain  (Complement component 8, alpha polypeptide; Ambekar AS *et al*., 2013) | NP\_000553.1 | P07357 | 4557389 | C8A  C8alpha | LC-MS/MS; Nano-LC-MS/MS; 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al.*, 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012 | Supposed to be produced by granulosa cells, involved in oocyte maturation (Yoo *et al*., 2013). |
| **149** | Complement component C8 beta chain  (Complement component 8, beta polypeptide; Ambekar AS *et al*., 2013) | NP\_000057.1 | P07358 | 4557391 | C8B  C8beta | LC-MS/MS; 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al.*, 2013; Twigt J *et al*., 2012 | Supposed to be produced by granulosa cells, involved in oocyte maturation (Yoo *et al*., 2013). |
| **150** | Complement component C8 gamma chain  (Complement component 8, gamma polypeptide; Ambekar AS *et al*., 2013) | NP\_000597.2 | P07360 | 166197660 | C8G  C8gamma | LC-MS/MS; 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al.*, 2013; Twigt J *et al*., 2012 | Supposed to be produced by granulosa cells, involved in oocyte maturation (Yoo *et al*., 2013). |
| **151** | Complement component C9 | NP\_001728.1 | P02748 | 4502511 | C9 | LC-MS/MS; Nano-LC-MS/MS; 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; PF2D Protein Fractionation-LC MS/MS | Yoo SW *et al.*, 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Jarkovska K *et al*., 2010; Hanrieder J *et al*., 2008 | Supposed to be produced by granulosa cells, involved in oocyte maturation (Yoo *et al*., 2013);  Some isoforms are more abundant in HFF than in HP (Jarkovska *et al*., 2010). |
| **152** | Complement factor B | NP\_001701.2 | P00751 | 67782358 | CFB  Factor B | 2DE/MALDI ToF MS; Nano-LC MALDI ToF/ToF MS | Ambekar AS *et al*., 2013; Bianchi *et al.*, 2013; Hanrieder J *et al*.,2009; Hanrieder J *et al*., 2008; Angelucci S *et al.*, 2006 | Some isoforms are more abundant in HFF than in HP (Angelucci *et al*., 2006);  Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013). |
| **153** | Complement factor D | NP\_001919.2 | P00746 | 42544239 | CFD  Factor D | LC-MS/MS; 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al.*, 2013; Twigt J *et al*., 2012 | Supposed to be produced by granulosa cells, involved in oocyte maturation (Yoo *et al*., 2013). |
| **154** | Complement factor H | NP\_000177.2 | P08603 | 62739186 | CFH  Factor H | 2DE/MALDI ToF MS; LC-MS/MS; CE-MALDI ToF/ToF MS; 2DE/LC-MS/MS; PF2D Protein Fractionation-LC MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013; Lo Turco EG *et al*., 2013; Yoo SW *et al.*, 2013; Twigt J *et al*., 2012; Hanrieder J *et al*., 2009 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Supposed to be produced by granulosa cells, involved in oocyte maturation (Yoo *et al*., 2013);  Some isoforms are more abundant in HFF than in HP (Jarkovska *et al*., 2010);  Found in pregnancy patients with endometriosis (Lo Turco *et al*., 2013). |
| **155** | Complement factor H-related protein 1 | NP\_002104.2 | Q03591 | 118442839 | CFHR1  FHR-1 | LC-MS/MS; 2DE/LC-MS/MS; 2DLC/MALDI ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al.*, 2013; Twigt J *et al*., 2012; Jarkovska K *et al*., 2011 | Supposed to be produced by granulosa cells, involved in oocyte maturation (Yoo *et al*., 2013);  Upregulated in patients affected by OHSS (Jarkovska *et al*., 2011). |
| **156** | Complement factor H-related protein 2 | NP\_005657.1 | **P36980** | 5031695 | CFHR2  FHR-2 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **157** | Complement factor H-related protein 3 | NP\_066303.2 | **Q02985** | 54792787 | **CFHR3**  FHR-3 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **158** | Complement factor H-related protein 5 | NP\_110414.1 | Q9BXR6 | 13540563 | CFHR5  FHR-5 | LC-MS/MS; 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al.*, 2013; Twigt J *et al*., 2012 | Supposed to be produced by granulosa cells, involved in oocyte maturation (Yoo *et al*., 2013). |
| **159** | Complement factor I | NP\_000195.2 | P05156 | 119392081 | CFI  Factor I | LC-MS/MS; 2DE/MALDI ToF MS; 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al.*, 2013; Lo Turco EG *et al*., 2013; Twigt J *et al*., 2012; Jarkovska K *et al*., 2011; Angelucci S *et al.*, 2006 | Supposed to be produced by granulosa cells, involved in oocyte maturation (Yoo *et al*., 2013);  Upregulated in patients affected by OHSS (Jarkovska *et al*., 2011);  Found in non pregnant patients with endometriosis (Lo Turco *et al*., 2013). |
| **160** | Contactin-1 | NP\_778203.1 | **Q12860.2**  (Q12860) | 28373119 | CNTN1  CNTN1 (F3) | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **161** | Corticosteroid-binding globulin | NP\_001747.2 | P08185 | 73858564 | SERPINA6 | Nano-LC-MS/MS; 2DE/LC-MS/MS | Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012 |  |
| **162** | CpG-binding protein | NP\_055408.2 | **Q9P0U4** | 156142180 | **CXXC1** | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **163** | C-reactive protein | NP\_000558.2 | P02741 | 55770842 | CRP | 2DE/MALDI ToF MS; 2DE/LC-MS/MS; LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; immunoturbidimetric assay; ELISA | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012; Yoo SW *et al*., 2011; Angelucci S *et al.*, 2006; Wunder DM *et al*., 2005; Orvieto R *et al*., 2004 | Some isoforms are more abundant in HFF than in HP (Angelucci *et al*., 2006);  High levels in PCOS (Deligeoroglou *et al*., 2012). |
| **164** | C-type lectin domain family 2 member D | NP\_001184247.1 | **Q9UHP7** | 309243121 | CLEC2D | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **165** | C-type lectin domain family 14 member A | NP\_778230.1 | **Q86T13** | 28269707 | CLEC14A | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **166** | Cullin-4A | NP\_001008895.1 | **Q13619** | 57165424 | **CUL4A**  **Cullin 4A** | CE-MALDI ToF/ToF MS | Hanrieder J *et al*., 2009 |  |
| **167** | C-X-C motif chemokine 10  (IP-10; Lédée N *et al*., 2008) | NP\_001556.2 | P02778 | 149999382 | CXCL10  IP10 | Multiplex sandwich immunoassay | Lédée N *et al*., 2011 |  |
| **168** | Cystatin-C | NP\_000090.1 | **P01034** | 4503107 | CST3  Cystatin C | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **169** | Cystatin-SA | NP\_001313.1 | **P09228** | 4503105 | CST2  Cystatin SA | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **170** | Cysteine-rich protein 2-binding protein | NP\_065397.3 | **Q9H8E8** | 258679433 | CSRP2BP  CRP2BP | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **171** | Cysteine-rich secretory protein 3 | NP\_006052.2 | **P54108** | 300244560 | **CRISP3**  **CRISP-3** | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **172** | Cytochrome c | NP\_061820.1 | **P99999** | 11128019 | CYCS  Cytochrome c | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **173** | Cytokine receptor common subunit beta | NP\_000386.1 | **P32927** | 4559408 | **CSF2RB** | Multiplex sandwich immunoassay; ELISA | Lédée N *et al*., 2011**; Hammadeh ME *et al*., 2003B** |  |
| **174** | Cytoplasmic protein NCK1 | NP\_001177725.1 | **P16333** | 299829184 | NCK1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **175** | C4b-binding protein alpha chain  (Complement component 4 binding protein, alpha; Ambekar AS *et al*., 2013) | NP\_000706.1 | P04003 | 4502503 | C4BPA  C4BP alpha | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/LC-MS/MS; LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al.*, 2013; Twigt J *et al*., 2012 | Supposed to be produced by granulosa cells, involved in oocyte maturation (Yoo *et al*., 2013). |
| **176** | Decorin | NP\_001911.1 | **P07585** | 4503271 | **DCN**  **Decorin** | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **177** | Dermcidin | NP\_444513.1 | **P81605** | 16751921 | **DCD**  Not supported by MetaCore | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **178** | Desmoglein-2 | NP\_001934.2 | Q14126 | 116534898 | DSG2  Desmoglein 2 | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **179** | Dihydropyrimidinase-related protein 3 | NP\_001378.1 | Q14195 | 4503379 | DPYSL3  CRMP4 | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **180** | DNA-directed RNA polymerase III subunit RPC7  (Polymerase (RNA) III (DNA DIRECT) polypeptide G (32 kD) | NP\_006458.2 | **O15318** | 115529475 | POLR3G | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **181** | DNA-directed RNA polymerase, mitochondrial  (Polymerase (RNA) mitochondrial (DNA) directed) | NP\_005026.3 | **O00411** | **110618253** | POLRMT  RPOM | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **182** | DNA polymerase subunit gamma-1  (Polymerase (DNA directed) gamma) | NP\_002684.1 | **P54098** | 4505937 | POLG  POLG cat | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **183** | Dopamine beta-hydroxylase | NP\_000778.3 | P09172 | 116534900 | DBH | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **184** | Dystonin | NP\_001138241 | Q03001.4  (Q03001) | 294862529 | DST  BPAG1 | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **185** | Dystroglycan | NP\_004384.4 | Q14118.2  **(Q14118)** | 294997284 | DAG1  Dystroglycan | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **186** | E3 ubiquitin-protein ligase HUWE1 | NP\_113584.3 | Q7Z6Z7 | 61676188 | HUWE1 | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **187** | Ecto-ADP-ribosyltransferase 4 | NP\_066549.2 | Q93070 | 61835134 | ART4  NAR4 | CE-MALDI ToF/ToF MS | Hanrieder J *et al*., 2009 |  |
| **188** | Ectonucleotide pyrophosphatase/phosphodiesterase family member 2 | NP\_001035181.1 | Q13822 | 91823602 | ENPP2 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **189** | EGF-containing fibulin-like extracellular matrix protein 1 | NP\_001034437.1 | Q12805 | 86788015 | EFEMP1  Fibulin-3 | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **190** | Endoplasmin | NP\_003290.1 | P14625 | 4507677 | HSP90B1  Endoplasmin | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **191** | Endothelial protein C receptor | NP\_006395.2 | **Q9UNN8** | 34335272 | PROCR  Protein C receptor (endothelial) | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **192** | Endothelin-1 | NP\_001946.3 | P05305 | 154800437 | EDN1  Endothelin-1 | RIA | Marinoni E *et al*., 2002; Haq *et al*., 1996 | Negatively correlated with follicle volume and its concentration may be associated with rate of successful pregnancies through IVF (Zhao *et al*., 2010);  Upregulated in PCOS (Diamanti-Kandarakis *et al*., 2001). |
| **193** | Endothelin-2 | NP\_001947.1 | P20800 | 4503463 | EDN2  Endothelin-2 | RIA | Haq *et al*., 1996 | May have a synergistic effect with IGF-1 system in promoting FSH activity in the follicle (Sudik *et al*., 1996). |
| **194** | Engulfment and cell motility protein 1 | NP\_055615.8 | Q92556 | 18765700 | ELMO1 | CE-MALDI ToF/ToF MS | Hanrieder J *et al*., 2009 |  |
| **195** | Enhancer of mRNA-decapping protein 4 | NP\_055144.3 | **Q6P2E9** | 45827771 | EDC4  Hedls | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **196** | Eotaxin | NP\_002977.1 | P51671 | 4506827 | CCL11  Eotaxin | Multiplex sandwich immunoassay | Lédée N *et al*., 2011 |  |
| **197** | Ephrin type-A receptor 3  (EPH receptor A3) | NP\_005224.2 | **P29320** | 21361241 | EPHA3  Ephrin-A receptor 3 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **198** | Eukaryotic translation initiation factor 3 subunit M | NP\_006351.2 | **Q7L2H7** | 23397429 | EIF3M  GA17 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **199** | Exostosin-like 2  (Exostosin-like glycosyltransferase 2) | NP\_001430.1 | **Q9UBQ6** | 14149609 | EXTL2  Exostosin-like 2 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **200** | Exportin-2 | NP\_001307.2 | P55060 | 29029559 | CSE1L | LC-MS/MS | Yoo SW *et al*., 2011 |  |
| **201** | Extracellular matrix protein 1 | NP\_004416.2 | Q16610 | 221316614 | ECM1 | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **202** | Extracellular sulfatase Sulf-2 | NP\_001155313.1 | Q8IWU5 | 240255483 | SULF2 | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **203** | Extracellular superoxide dismutase [Cu-Zn] | NP\_003093.2 | P08294 | 118582275 | SOD3  SOD3 (EC-SOD) | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al.*, 2011 |  |
| **204** | Ezrin | NP\_001104547.1 | P15311 | 161702986 | EZR  VIL2 (ezrin) | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **205** | Fanconi-associated nuclease 1 | NP\_055782.3 | **Q9Y2M0** | 226246523 | FAN1  MTMR15 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **206** | Far upstream element-binding protein 3 | NP\_003925.1 | **Q96I24** | 100816392 | FUBP3  FBP3 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **207** | FAST kinase domain-containing protein 3 | NP\_076996.2 | **Q14CZ7** | 40068497 | FASTKD3 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **208** | Fatty acid synthase | NP\_004095.4 | P49327 | 41872631 | FASN | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **209** | F-box only protein 6 | NP\_060908.1 | Q9NRD1 | 8922188 | FBXO6  FBX6 | Nano-LC MALDI ToF/ToF MS | Hanrieder J *et al*., 2008 |  |
| **210** | Ferritin heavy chain  (Ferritin heavy polipeptide 1) | NP\_002023.2 | **P02794** | 56682959 | FTH1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **211** | Ferritin light chain | NP\_000137.2 | **P02792** | 20149498 | FTL | 2DE/MALDI ToF MS | Jarkovska K *et al*., 2011 | Down-regulated in patients affected by OHSS (Jarkovska *et al*., 2011). |
| **212** | Fetuin-B | NP\_055190.2 | Q9UGM5 | 58331240 | FETUB | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **213** | Fibrillin-1 | NP\_000129.3 | P35555 | 281485550 | FBN1  Fibrillin 1 | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **214** | Fibrinogen alpha chain  (Fibrinogen alpha chain isoform alpha-E; Kushnir MM *et al.*, 2012) | NP\_000499.1 | P02671 | 4503689 | FGA  Fibrinogen alpha | Nano-LC-MS/MS; 2DE/LC-MS/MS; LC-MS/MS; Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS; 2DE/MALDI ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Yoo SW *et al.*, 2011; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008; Angelucci S *et al.*, 2006 | Correlated to IVF outcome (Kushnir *et al*., 2012). |
| **215** | Fibrinogen beta chain | NP\_005132.2 | P02675 | 70906435 | FGB  Fibrinogen beta | 2DE/MALDI ToF MS; Nano-LC-MS/MS; 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS; 2DE/MALDI ToF/ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Jarkovska K *et al*., 2010; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008; Angelucci S *et al.*, 2006 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Correlated to IVF outcome (Kushnir *et al*., 2012);  Some isoforms are more abundant in HP than in HFF (Jarkovska *et al*., 2010);  Some isoforms are more abundant in HFF than in HP (Angelucci *et al*., 2006). |
| **216** | Fibrinogen gamma chain  (Fibrinogen gamma chain isoform gamma-B; Kushnir MM *et al.*, 2012) | NP\_000500.2 | P02679.3  (P02679) | 60906437 | FGG  Fibrinogen gamma | 2DE/MALDI ToF MS; Nano-LC-MS/MS; LC-MS/MS; Nano-LC MALDI ToF/ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/LC-MS/MS; | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Yoo SW *et al.*, 2011; Hanrieder J *et al*., 2008; Kim YS *et al.*, 2006; Angelucci S *et al.*, 2006 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Some isoforms are more abundant in HFF than in HP (Angelucci *et al*., 2006);  Upregulated in recurrent spontaneous abortions (Kim *et al*., 2006). |
| **217** | Fibroblast growth factor 2  (Basic fibroblast growth factor (bFGF), Malamitsi-Puchner A *et al*., 2001) | NP\_001997.5 | **P09038** | 153285461 | FGF2 | EIA; ELISA; Chemiluminescent enzyme labeled immunometric assay | Asimakopoulos B *et al*., 2006; Malamitsi-Puchner A *et al*., 2003; Malamitsi-Puchner A *et al*., 2001 |  |
| **218** | Fibroblast growth factor 7 (KGF or FGF7) | NP\_002000.1 | P21781 | 4503705 | FGF7 | ELISA | Osuga Y *et al*., 2001 | Its concentration positively correlated with that of progesterone and testosterone and it has an inhibitory effect on progesterone production by GCs (Osuga *et al*., 2001). |
| **219** | Fibronectin | NP\_473375.2 | P02751 | 47132547 | FN1  Fibronectin | 2DE/LC-MS/MS; LC-MS/MS; Nano-LC MALDI ToF/ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012; Yoo SW *et al.*, 2011; Hanrieder J *et al*., 2008 |  |
| **220** | Fibulin-1 | NP\_006477.2 | P23142 | 34734062 | FBLN1  Fibulin-1 | 2DE/LC-MS/MS; LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012; Yoo SW *et al*., 2011 |  |
| **221** | Ficolin-2 | NP\_001987.2 | **Q15485-2**  **(Q15485)** | 8051586 | FCN2  L-Ficolin | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **222** | Ficolin-3 | NP\_003656.2 | O75636 | 27754776 | FCN3  H-Ficolin | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Jarkovska K *et al*., 2010 | Some isoforms are more abundant in HP than in HFF (Jarkovska *et al*., 2010). |
| **223** | Focal adhesion kinase 1 | NP\_722560.1 | **Q05397** | 24476013 | PTK2  FAK1 | 2DE/LC-MS/MS | Lo Turco EG *et al*.,2013 | Found in pregnancy patients with endometriosis (Lo Turco *et al*., 2013);  Upregulated in non pregnancy patients with endometriosis (Lo Turco *et al*., 2013). |
| **224** | Follistatin | NP\_006341.1 | P19883 | 5453652 | FSTftl  Follistatin | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 | Inhibits FSH secretion from pituitary gonadotrophs (Welt *et al*., 2002);  Produced in ovary by GCs and envolved in follicle maturation (Jeppesen *et al*., 2012);  Modulates follicular activities of activins and inhibitins (Schneyer, 1994); (Schneyer *et al*., 2000) (Jeppesen *et al*., 2012). |
| **225** | Formimidoyltransferase-cyclodeaminase | NP\_006648.1 | **O95954** | 11140815 | FTCD | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **226** | FRAS1-related extracellular matrix protein 2 | NP\_997244.3 | **Q5SZK8** | 79749430 | FREM2 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **227** | Fructose-bisphosphate aldolase A  (Aldolase A, fructose-bisphosphate) | NP\_000025.1 | **P04075** | 4557305 | ALDOA | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **228** | Fructose-bisphosphate aldolase B  (Aldolase B, fructose-bisphosphate) | NP\_000026.2 | **P05062** | 40354205 | ALDOB | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **229** | FSH:  Glycoprotein hormones alpha chain  +  Follitropin subunit beta | NP\_001239312.1  NP\_001018090.1 | P01215  P01225 | 356874784  66528995 | CGA  CG alpha  FSHB  FSH-beta | RIA; microparticle enzyme immunoassay; ELFA chemiluminescent immunoassay | Barberi M *et al*., 2012; Rosen MP *et al*., 2009; Agrawal R *et al*., 2002 | Down-regulates AMH expression (Andersen *et al*., 2006). |
| **230** | Fumarylacetoacetase | NP\_000128.1 | **P16930** | 4557587 | FAH  FAAA | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **231** | Galectin-3-binding protein | NP\_005558.1 | Q08380 | 5031863 | LGALS3BP  90k | 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012; Hanrieder J *et al*., 2008 |  |
| **232** | Galectin-7 | NP\_005558.1 | **P47929** | 5031863 | LGALS7  Galectin-7 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **233** | Gamma-glutamyl hydrolase | NP\_003869.1 | **Q92820** | 4503987 | GGH | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **234** | Ganglioside GM2 activator | NP\_000396.2 | **P17900** | 39995109 | GM2A | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **235** | Gelsolin | NP\_000168.1 | P06396 | 4504165 | GNS  Not supported by MetaCore | 2DE/MALDI ToF MS; 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013; Twigt J *et al*., 2012; Jarkovska K *et al*., 2011; Hanrieder J *et al*., 2008 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Down-regulated in patients affected by OHSS (Jarkovska *et al*., 2011). |
| **236** | Glia-derived nexin | NP\_006207.1 | P07093 | 24307907 | SERPINE2 | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **237** | Glutathione peroxidase 3 | NP\_002075.2 | P22352 | 6006001 | GPX3 | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012; Yoo SW *et al.*, 2011 | Its pattern changes during reproductive ageing and this may impair ROS scavenging efficiency in the follicular environment (Carbone *et al*., 2003). |
| **238** | Glutathione reductase | Not specified | Not specified | Not specified | Not specified | Enzymatic assay; Western Blot | Carbone MC *et al.*, 2003 | Its pattern changes during reproductive ageing and this may impair ROS scavenging efficiency in the follicular environment (Carbone *et al*., 2003). |
| **239** | Glutathione S-transferase A1 | NP\_665683.1 | P08263 | 22091454 | GSTA1 | 2DE/LC-MS/MS | Twigt J *et al*., 2012; Yoo SW *et al.*, 2011 | Its pattern changes during reproductive ageing and this may impair ROS scavenging efficiency in the follicular environment (Carbone *et al*., 2003). |
| **240** | Glutathione S-transferase omega-1 | NP\_004823.1 | P78417 | 4758484 | GSTO1 | LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al.*, 2011 | Its pattern changes during reproductive ageing and this may impair ROS scavenging efficiency in the follicular environment (Carbone *et al*., 2003). |
| **241** | Glutathione synthetase | NP\_000169.1 | P48637 | 4504169 | GSS  GSHB | LC-MS/MS | Yoo SW *et al.*, 2011 |  |
| **242** | Glyceraldehyde-3-phosphate dehydrogenase | NP\_002037.2 | P04406 | 7669492 | GAPDH  G3P2 | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **243** | Golgi-associated plant pathogenesis-related protein 1 (GLI pathogenesis-related 2) | NP\_071738.1 | **Q9H4G4** | 11641247 | GLIPR2  GAPR-1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **244** | Golgi resident protein GCP60 | NP\_073572.2 | **Q9H3P7** | 15826852 | ACBD3  GOCAP1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **245** | Golgin subfamily B member 1 | NP\_004478.3 | **Q14789** | 148596984 | GOLGB1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **246** | Granulocyte colony-stimulating factor  (G-CSF; Lédée N *et al*., 2008) | NP\_000750.1 | P09919 | 4503079 | CSF3  G-CSF | ELISA; Singleplex microbead assay; Multiplex sandwich immunoassay | Lédée N *et al*., 2011; Lédée N *et al*., 2010; Salmassi A *et al*., 2005B; Salmassi A *et al*., 2004 | It is hypothesizes that G-CSF influences the mRNA content in the oocyte and provides the embryo with crucial information on how to repair itself (Lédée *et al*., 2008);  Involved in follicle development and may be a predictor of IVF outcome (Salmassi *et al*., 2005B);  Down-regulated in patients affected by endometriosis (Salmassi *et al*., 2005B). |
| **247** | Growth/differentiation factor 9 (GDF-9) | NP\_005251.1 | O60383 | 4885261 | GDF9 | ELISA; Western Blot | Han M *et al*., 2011; Gode F *et al*., 2011; Hendarto H *et al*., 2010 | GDF9: BMP15 heterodimers control ovarian physiology (Peng *et al*., 2013);  Required for ovarian folliculogenesis, member of TGF-β superfamily, attenuates supressive effects of activin A by increasing the expression of inhibin B (Kedem, 2011) (Shi *et al*., 2011);  Endometriosis affected patients showed lower concentration of GDF9 in FF (Hendarto *et al*., 2010);  Abberantly expressed in oocytes from PCOS women (Teixeira Filho *et al*., 2002);  Coexpressed with BMP15 and it plays a fundamental role in GC steirodogenesis, ovulation, oocyte maturation and embryo development (de Resende *et al*., 2012);  Appears to decrease with age (Han *et al*., 2011);  Correlated with oocyte nuclear maturation and embryo quality (Gode *et al*., 2011). |
| **248** | Haptoglobin | NP\_005134.1 | P00738 | 4826762 | HP | 2DE/MALDI ToF MS; Nano-LC-MS/MS; 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS; Seldi ToF/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008; Angelucci S *et al.*, 2006; Schweigert FJ *et al*., 2006 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Correlated to IVF outcome (Kushnir *et al*., 2012);  Some isoforms are more abundant in HFF than in HP (Angelucci *et al*., 2006);  Probably interfering with Apolipoprotein A-I in cholesterol and vitamin E exchange between HDL and GCs (Porta *et al*., 1999). |
| **249** | Haptoglobin-related protein | NP\_066275.3 | P00739 | 45580723 | HPR | 2DE/LC-MS/MS; Nano-LC-MS/MS; 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012; Hanrieder J *et al*., 2008 |  |
| **250** | Harmonin | NP\_005700.2 | **Q9Y6N9** | 71480164 | USH1C  Harmonin | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **251** | Heat shock cognate 71 kDa protein | NP\_006588.1 | P11142 | 5729877 | HSPA8  HSC70 | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **252** | Heat shock protein HSP 90-alpha | NP\_005339.3 | P07900 | 154146191 | HSP90AA1  HSP90 alpha | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **253** | Heat shock protein HSP 90-beta | NP\_031381.2 | P08238 | 20149594 | HSP90AB1  HSP90 beta | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **254** | Hemicentin-2  (Hemicentin-2-like) | XP\_003959975.1 | **Q8NDA2-2**  **(Q8NDA2)** | 410170582 | HMCN2 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **255** | Hemoglobin subunit alpha | NP\_000508.1 | P69905 | 4504345 | HBA1  Alpha1-globin | Nano-LC-MS/MS; 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS | Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Hanrieder J *et al*., 2008 |  |
| **256** | Hemoglobin subunit beta | NP\_000509.1 | P68871 | 4504349 | HBB | 2DE/MALDI ToF MS; Nano-LC-MS/MS; 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Correlated to IVF outcome (Kushnir *et al*., 2012). |
| **257** | Hemopexin | NP\_000604.1 | P02790 | 11321561 | HPX  Hemopexin | 2DE/MALDI ToF MS; Nano-LC-MS/MS; 2DE/LC-MS/MS; Nano-LC-QToF; 2DE/LC-MS/MS; CE-MALDI ToF/ToF MS; PF2D Protein Fractionation-LC MS/MS; 2DLC/MALDI ToF MS | Bianchi L *et al*., 2013; Lo Turco EG *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Jarkovska K *et al*., 2011; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008; Kim YS *et al.*, 2006; Angelucci S *et al.*, 2006 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Correlated to IVF outcome (Kushnir *et al*., 2012);  Some isoforms are more abundant in HFF than in HP (Jarkovska *et al*., 2010);  Upregulated in recurrent spontaneous abortions (Kim *et al*., 2006);  Some isoforms are more abundant in HFF than in HP (Angelucci *et al*., 2006);  Upregulated in patients affected by OHSS (Jarkovska *et al*., 2011);  Found in pregnancy patients with endometriosis (Lo Turco *et al*., 2013). |
| **258** | Heparin cofactor 2 | NP\_000176.2 | P05546 | 73858566 | SERPIND1  HC II | Nano-LC-MS/MS; 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS | Twigt J *et al*., 2012; Kushnir MM *et al.*, 2012; Hanrieder J *et al*., 2008 |  |
| **259** | Hepatocyte growth factor | NP\_000592.3 | **P14210** | 33859835 | HGF | ELISA | Şahin N *et al*., 2013; Kawano Y *et al*., 2003 | Produced by mesenchymal theca cells (Şahin *et al*., 2013);  Regulates growth and differentiation of ovarian follicles (Şahin *et al*., 2013);  May be a crucial determinant of fertilization success (Şahin *et al*., 2013);  Modulates, with c-Met, steroidogenesis, the growth of theca and granulosa cells, and apoptosis of granulosa cells (Zachow *et al*., 1997);  Higher levels in mature oocytes than in immature oocytes (Şahin *et al*., 2013);  May play an important role in follicular growth and development (Kawano *et al*., 2003). |
| **260** | Hepatocyte growth factor activator | NP\_001519.1 | Q04756 | 4504383 | HGFAC  HGFA | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **261** | Hepatocyte growth factor-like protein | NP\_066278.3 | **P26927** | 205277383 | MST1  MSP | 2DE/LC-MS/MS; 2DLC/MALDI ToF | Twigt J *et al*., 2012; Jarkovska K *et al*., 2011 |  |
| **262** | High affinity cAMP-specific and IBMX-insensitive 3',5'-cyclic phosphodiesterase 8A | NP\_001230066.1 | **O60658** | 341823698 | PDE8A | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **263** | Histidine-rich glycoprotein | NP\_000403.1 | P04196 | 4504489 | HRG  HPRG | Nano-LC-MS/MS; 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; PF2D Protein Fractionation-LC MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Jarkovska K *et al*., 2010; Hanrieder J *et al*., 2008 | Correlated to IVF outcome (Kushnir *et al*., 2012);  Some isoforms are more abundant in HFF than in HP (Jarkovska *et al*., 2010). |
| **264** | Histone H2A type 1-B/E | NP\_066390.1 | P04908 | 10645195 | HIST1H2AB  HIST1H2AE | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **265** | HLA class I histocompatibility antigen, alpha chain G | NP\_002118.1 | **P17693** | 4504415 | HLA-G | ELISA | Rizzo R *et al*., 2007; van Lierop MJ *et* al., 2002 |  |
| **266** | Hormone-sensitive lipase | NP\_005348.2 | Q05469 | 21328446 | LIPE  LIPS | 2DE/MALDI ToF MS | Lee HC *et al*., 2005 | Down-regulated in PCOS (Lee *et al*., 2005). |
| **267** | Hyaluronan-binding protein 2 | NP\_001171131.1 | Q14520 | 295054188 | HABP2 | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **268** | Hypoxia upregulated protein 1 | NP\_006380.1 | Q9Y4L1 | 5453832 | HYOU1 | LC-MS/MS | Yoo SW *et al*., 2011 |  |
| **269** | Ig alpha-1 chain C region | P01876.2 | P01876.2  (P01876) | 113584 | IGHA1 | 2DE/MALDI ToF MS; Nano-LC-MS/MS; 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS | Bianchi L *et al*., 2013; Lo Turco EG *et al*., 2013; Twigt J *et al*., 2012; Jarkovska K *et al*., 2011; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Found in pregnancy patients with endometriosis (Lo Turco *et al*., 2013). |
| **270** | Ig alpha-2 chain C region | P01877.3 | P01877.3  (P01877) | 218512088 | IGHA2 | 2DE/MALDI ToF MS; 2DE/LC-MS/MS | Bianchi L *et al*., 2013; Twigt J *et al*., 2012 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013). |
| **271** | Ig delta chain C region | P01880.2 | P01880.2  (P01880) | 193806360 | IGHD | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **272** | Ig epsilon chain C region | P01854.1 | P01854.1  (P01854) | 119512 | IGHE | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **273** | Ig gamma-1chain C region | P01857.1 | P01857.1  (P01857) | 121039 | IGHG1 | 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS | Twigt J *et al*., 2012; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  It may be related with the induction of acrosome reaction of spermatozoa (Marín-Briggiler *et al*., 2003). |
| **274** | Ig gamma-2chain C region | P01859.2 | P01859.2  (P01859) | 218512079 | IGHG2 | 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS | Twigt J *et al*., 2012; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  It may be related with the induction of acrosome reaction of spermatozoa (Marín-Briggiler *et al*., 2003). |
| **275** | Ig gamma-3 chain C region | P01860.2 | P01860.2  (P01860) | 193806361 | IGHG3 | 2DE/LC-MS/MS; CE-MALDI ToF/ToF MS | Twigt J *et al*., 2012; Hanrieder J *et al*., 2009 | It may be related with the induction of acrosome reaction of spermatozoa (Marín-Briggiler *et al*., 2003). |
| **276** | Ig gamma-4 chain C region | P01861.1 | P01861.1  (P01861) | 121047 | IGHG4 | 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS | Twigt J *et al*., 2012; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008 | It may be related with the induction of acrosome reaction of spermatozoa (Marín-Briggiler *et al*., 2003). |
| **277** | Ig heavy chain V-III region BRO | P01766.1 | P01766.1  (P01766) | 123845 |  | 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS | Twigt J *et al*., 2012; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008 |  |
| **278** | Ig heavy chain V-III region BUR | P01773.1 | P01773.1  (P01773) | 123852 |  | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **279** | Ig heavy chain V-III region BUT | P01767.1 | P01767.1  (P01767) | 123846 |  | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **280** | Ig heavy chain V-III region CAM | P01768.1 | P01768.1  (P01768) | 123847 |  | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **281** | Ig heavy chain V-III region GA | P01769.1 | P01769.1  (P01769) | 123848 |  | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **282** | Ig heavy chain V-III region GAL | P01781.1 | P01781.1  (P01781) | 123860 |  | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **283** | Ig heavy chain V-III region HIL | P01771.1 | P01771.1  (P01771) | 123850 |  | 2DE/LC-MS/MS; CE-MALDI ToF/ToF MS | Twigt J *et al*., 2012; Hanrieder J *et al*., 2009 |  |
| **284** | Ig heavy chain V-III region JON | P01780.1 | P01780.1  (P01780) | 123859 |  | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **285** | Ig heavy chain V-III region TIL | P01765.1 | P01765.1  (P01765) | 123844 |  | Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS | Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008 |  |
| **286** | Ig heavy chain V-III region TRO | P01762.1 | P01762.1  (P01762) | 123841 |  | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **287** | Ig heavy chain V-III region TUR | P01779.1 | P01779.1  (P01779) | 123858 |  | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **288** | Ig heavy chain V-III region VH26 | P01764.1 | P01764.1  (P01764) | 123843 |  | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **289** | Ig kappa chain C region | AGH70219.1 | P01834 | 469664536 | IGKC | 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS | Lo Turco EG *et al*., 2013; Twigt J *et al*., 2012; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008 |  |
| **290** | Ig kappa chain V-I region AU | P01594.1 | P01594.1  (P01594) | 125758 |  | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **291** | Ig kappa chain V-I region DEE | P01597.1 | P01597.1  (P01597) | 125761 |  | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **292** | Ig kappa chain V-I region EU | P01598.1 | P01598.1  (P01598) | 125762 |  | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **293** | Ig kappa chain V-I region HK102 | P01602.1 | P01602.1  (P01602) | 125766 | IGKV1-5 | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **294** | Ig kappa chain V-I region Lay | P01605.1 | P01605.1  (P01605) | 125769 |  | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **295** | Ig kappa chain V-I region Mev | P01612.1 | P01612.1  (P01612) | 125776 |  | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **296** | Ig kappa chain V-I region OU | P01606.1 | P01606.1  (P01606) | 125770 |  | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **297** | Ig kappa chain V-I region WEA | P01610.1 | P01610.1  (P01610) | 125774 |  | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **298** | Ig kappa chain V-II region MIL | P01616.1 | P01616.1  (P01616) | 125786 |  | CE-MALDI ToF/ToF MS | Hanrieder J *et al*., 2009 |  |
| **299** | Ig kappa chain V-II region RPMI 6410 | P06310.1 | P06310.1  (P06310) | 125792 |  | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **300** | Ig kappa chain V-II region TEW | P01617.1 | P01617.1  (P01617) | 125788 |  | 2DE/LC-MS/MS; CE-MALDI ToF/ToF MS | Twigt J *et al*., 2012; Hanrieder J *et al*., 2009 |  |
| **301** | Ig kappa chain V-III region B6 | P01619.1 | P01619.1  (P01619) | 125795 |  | 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS | Twigt J *et al*., 2012; Hanrieder J *et al*., 2008 |  |
| **302** | Ig kappa chain V-III region NG9 | P01621.1 | P01621.1  (P01621) | 125799 |  | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **303** | Ig kappa chain V-III region SIE | P01620.1 | P01620.1  (P01620) | 125797 |  | 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS | Twigt J *et al*., 2012; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008 |  |
| **304** | Ig kappa chain V-III region VG | AAA20447.1 | P04433 | 520413 |  | 2DE/LC-MS/MS; CE-MALDI ToF/ToF MS | Twigt J *et al*., 2012; Hanrieder J *et al*., 2009 |  |
| **305** | Ig kappa chain V-III region VH | XP\_003403553.1 | P04434 | 341915156 |  | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **306** | Ig kappa chain V-IV region Len | P01625.2 | P01625.2  (P01625) | 1730075 |  | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **307** | Ig lambda chain V-I region HA | P01700.1 | P01700.1  (P01700) | 126539 |  | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **308** | Ig lambda chain V-II region TRO | P01707.1 | P01707.1  (P01707) | 126557 |  | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **309** | Ig lambda chain V-III region LOI | P80748.1 | P80748.1  (P80748) | 6016518 |  | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **310** | Ig lambda chain V-IV region Hil | P01717.1 | P01717.1  (P01717) | 126568 |  | Nano-LC MALDI ToF/ToF MS | Hanrieder J *et al*., 2008 |  |
| **311** | Ig lambda-1 chain C regions | AAA59107.1 | P01842 | 186127 |  | Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS | Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008 |  |
| **312** | Ig lambda-2 chain C regions | P0CG05.1 | P0CG05.1  (P0CG05) | 298351714 | IGLC2  Ig lambda-2 chain C regions | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **313** | Ig mu chain C region | P01871.3 | P01871.3  (P01871) | 193806374 | IGHM | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **314** | Immunoglobulin J chain | [NP\_653247.1](http://www.ncbi.nlm.nih.gov/protein/NP_653247.1) | P01591 | 21489959 | JCHAIN  IgJ | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **315** | Immunoglobulin lambda-like polypeptide 5 | NP\_001171597.1 | B9A064 | 295986608 | IGLL5 | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **316** | Inhibin:  A = inhibin alpha chain+inhibin beta A chain  B = inhibin alpha chain+inhibin beta B chain  Inhibin alpha chain  Inhibin beta A chain  Inhibin beta B chain | NP\_002182.1  NP\_002183.1  NP\_002184.2 | P05111  P08476  P09529 | 4504697  4504699  154813204 | Inhibin  INHA  Inibin alpha subunit  INHBA  Activin beta A  INHBB  Activin beta B | (INHIBIN A) ELISA; EIA; 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; Two-step immunoassay; Two-site enzyme immunoassay  (INHIBIN B) ELISA; microplate enzyme immunoassay  2DE/LC-MS/MS | Moos J *et al*., 2009; Wen X *et al*., 2006; Andersen CY *et al*., 2006; Cunha-Filho JS *et al*., 2005A; Welt CK *et al*., 2005; Vitale A *et al*., 2001; Klein NA *et al*., 2000  Kaya A *et al*., 2012; Humaidan P *et al*., 2011; Moos J *et al*., 2009; Yding Andersen C *et al*., 2008; Wen X *et al*., 2006; Andersen CY *et al*., 2006; Welt CK *et al*., 2005; Fried G *et al*., 2003; Luisi S *et al*., 2003; Chang CL *et al*., 2002; Vitale A *et al*., 2001; Klein NA *et al*., 2000  Twigt J *et al*., 2012(Inhibin alpha chain) | Produced by GCs, TCs and lutein cells (Hayes *et al*., 1998) (Luisi *et al*., 2005);  Belong to trasforming growth factor  superfamily (Welt *et al*., 2002);  Interact with follistatin (Welt *et al*., 2002) (Luisi *et al*., 2005);  Actively involved in regulation of GC proliferation (Mather *et al*., 1997) (Luisi *et al*., 2005);  Affects follicular growth and development and it is supposed to exert a key role in premature ovarian failure (Shelling *et al*., 2000);  Endocrine feedback negative regulator of pituitary FSH release (FSH stimulates inhibin production by GCs) (Welt *et al*., 2002) (de Jong *et al*., 1988);  Reduced in women with PCOS (Welt *et al*., 2005);  Inhibin B is a marker of follicular development and a predictor of quality embryo (Chang *et al*., 2002). |
| **317** | Insulin-like growth factor-binding protein complex acid labile subunit | NP\_004961.1 | P35858 | 4826772 | IGFALS | Nano-LC-MS/MS; 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Yoo SW *et al*., 2011; Hanrieder J *et al*., 2008 |  |
| **318** | Insulin-like growth factor-binding protein 1 | NP\_000587.1 | P08833 | 4504615 | IGFBP1  IBP1 | IRMA; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; RIA | Ambekar AS *et al*., 2013; Cunha-Filho JS *et al*., 2005B; Fried G *et al*., 2003; Stadtmauer LA *et al*., 2001 | Correleted with oocyte qualyity and maturity (Valckx *et al*., 2012) (Artini *et al*., 1994) (Jimena *et al*., 1992) (Oosterhuis *et al*., 1998). |
| **319** | Insulin-like growth factor-binding protein 2 | NP\_000588.2 | P18065 | 55925576 | IGFBP2  IBP2 | LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; RIA | Ambekar AS *et al*., 2013; Yoo SW *et al*., 2011; Klein NA *et al*., 2000 |  |
| **320** | Insulin-like growth factor-binding protein 3 | NP\_001013416.1 | P17936 | 62243068 | IGFBP3  IBP3 | 2DE/LC-MS/MS; LC-MS/MS; ELISA; IRMA, RIA; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; Two-site immuno-radiometric assay | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012; Kaya A *et al*., 2012; Yoo SW *et al*., 2011; Genc G *et al*., 2011; Choi YS *et al*., 2009; Wang TH *et al*., 2006; Cunha-Filho JS *et al*., 2005B; Dorn C *et al*., 2003; Stadtmauer LA *et al*., 2001; Klein NA *et al*., 2000 | High levels suggest better oocyte maturation, fertilization and embryo development (Wang *et al*., 2006);  Correletadet with a good reproductive outcame after IVF (Cunha-Filho *et al*., 2005B). |
| **321** | Insulin-like growth factor-binding protein 4 | NP\_001543.2 | P22692 | 62243290 | IGFBP4  IBP4 | ELISA; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; SDS-PAGE/Western Blot | Ambekar AS *et al*., 2013; Zhong G *et al*., 2011; Choi YS *et al*., 2009; Yding Andersen C *et al*., 2008; Wang TH *et al*., 2006; Choi D *et al*., 2003 | High levels suggest better oocyte maturation, fertilization and embryo development (Wang *et al*., 2006);  Upregulated in PCOS (Giudice *et al*., 1995). |
| **322** | Insulin-like growth factor-binding protein 5 | NP\_000590.1 | P24593 | 10834982 | IGFBP5  IBP5 | LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al*., 2011 |  |
| **323** | Insulin-like growth factor-binding protein 7 | NP\_001544.1 | Q16270 | 4504619 | IGFBP7 | LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al*., 2011 |  |
| **324** | Insulin-like growth factor I | NP\_001104754.1 | P05019 | 163659901 | IGF1  IGF-1 | IRMA; RIA; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; ELISA | Ambekar AS *et al*., 2013; Kaya A *et al*., 2012; Genc G *et al*., 2011; Choi YS *et al.*, 2009; Cunha-Filho JS *et al*., 2005B; Choi D *et al*., 2003; Dorn C *et al*., 2003; Fried G *et al*., 2003; Hammadeh ME *et al*., 2003B; Stadtmauer LA *et al*., 2001; Klein NA *et al*., 2000 | Correleted with oocyte qualyity and maturity (Valckx *et al*., 2012) (Artini *et al*., 1994) (Jimena *et al*., 1992) (Oosterhuis *et al*., 1998). |
| **325** | Insulin-like growth factor II | NP\_00112170.1 | P01344 | 108796063 | IGF2  IGF-2 | 2DE/LC-MS/MS; LC-MS/MS; ELISA; RIA; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; IRMA | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012; Kaya A *et al*., 2012; Yoo SW *et al*., 2011; Zhong G *et al*., 2011; Choi YS *et al*., 2009; Wang TH *et al*., 2006; Wang TH *et al*., 2002; Stadtmauer LA *et al*., 2001; Klein NA *et al*., 2000 | High levels suggest better oocyte maturation and embryo development (Wang *et al*., 2006);  Upregulated in PCOS (Giudice *et al*., 1995). |
| **326** | Inter-alpha-trypsin inhibitor heavy chain H1 | NP\_002206.2 | P19827 | 156119625 | ITIH1  ITIH | 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012; Yoo SW *et al*., 2011; Hanrieder J *et al*., 2008 |  |
| **327** | Inter-alpha-trypsin inhibitor heavy chain H2 | NP\_002207.2 | P19823 | 70778918 | ITIH2 | 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008 |  |
| **328** | Inter-alpha-trypsin inhibitor heavy chain H3 | NP\_002208.2 | Q06033 | 133925809 | ITH3  Not supported by MetaCore | 2DE/LC-MS/MS; LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012; Yoo SW *et al*., 2011 |  |
| **329** | Intercellular adhesion molecule 1 | NP\_000192.2 | P05362 | 167466198 | ICAM1 | Enzyme-linked immunoassay | Hammadeh ME *et al*., 2003A |  |
| **330** | Intercellular adhesion molecule 2 | NP\_000864.2 | P13598 | 153082696 | ICAM2 | LC-MS/MS | Yoo SW *et al*., 2011 |  |
| **331** | Interferon gamma | NP\_000610.2 | P01579 | 56786138 | **INFG**  **Not supported by MetaCore** | Multiplex sandwich immunoassay | Lédée-Bataille N *et al*., 2001 |  |
| **332** | Interleukin-1 alpha | NP\_000566.3 | P01583 | 27894330 | **IL1A**  **IL-1 alpha**  MetaCore supports only the *Rattus norvegicus* homologous prot. | LC-MS/MS gene chip assay; ELISA; Multiplex sandwich immunoassay | Yoo SW *et al*., 2011; Lédée N *et al*., 2011; Yoshino O *et al*., 2003 | Expressed by the GCs and cumulus cells (Yoo *et al*., 2011) (Gérard *et al*., 2004) (de Los Santos *et al*., 1998);  Involved in oocyte maturation and ovulation (Gérard *et al*., 2004). |
| **333** | Interleukin-1 beta | NP\_000567.1 | P01584 | 10835145 | **IL1B**  **IL-1 beta** | EIA; ELISA | Asimakopoulos B *et al*., 2006; Nikolettos N *et al*., 2004; Fujii A *et al*., 2003; Yoshino O *et al*., 2003; Barrionuevo MJ *et al*., 2000 | Expressed by GCs and cumulus cells (Gerard *et al*., 2004) (de Los Santos *et al*., 1998);  Imporant positive blood predictor of ongoing pregnancy in IVF (Bonetti *et al*., 2010);  Involved in trophoblast implantation (Castro-Rendón *et al*., 2006);  Synergic effect with LIF on the control of blastocyst implantation (Sawai *et al*., 1997);  Contradictorily associated with IVF outcome (Positively: Mendoza *et al*., 1999) (Negatively: Mendoza *et al*., 2002). |
| **334** | Interleukin-1 receptor accessory protein | NP\_608273.1 | Q9NPH3 | 19882209 | **IL1RAP** | LC-MS/MS | Yoo SW *et al*., 2011 |  |
| **335** | Interleukin-1 receptor accessory protein-like 1 | NP\_055086.1 | Q9NZN1 | 7657232 | IL1RAPL1 | CE-MALDI ToF/ToF MS | Hanrieder J *et al*., 2009 |  |
| **336** | Interleukin-1 receptor antagonist protein | NP\_776214.1 | P18510 | 27894319 | **IL1RN** | ELISA; Multiplex sandwich immunoassay | Lédée N *et al*., 2011; Lédée N *et al*., 2008 |  |
| **337** | Interleukin-2 | NP\_000577.2 | P60568 | 28178861 | IL2  IL-2 | Multiplex sandwich immunoassay | Lédée N *et al*., 2011 |  |
| **338** | Interleukin-4 | NP\_000580.1 | P05112 | 4504669 | IL4  IL-4 | Gene chip assay; ELISA; Multiplex sandwich immunoassay | Yoo SW *et al*., 2011; Lédée N *et al*., 2011; Lédée N *et al*., 2008 | Expressed by GCs (Yoo *et al*., 2011). |
| **339** | Interleukin-5 | NP\_000870.1 | P05113 | 4504671 | IL5  IL-5 | Multiplex sandwich immunoassay | Lédée N *et al*., 2011 |  |
| **340** | Interleukin-6 | NP\_000591.1 | P05231 | 10834984 | **IL6**  **IL-6** | LC-MS/MS gene chip assay; ELISA; EIA; Multiplex sandwich immunoassay; solid-phase; chemiluminiscent enzyme immonuassy system | Yoo SW *et al*., 2011; Altun T *et al*., 2011; Lédée N *et al*., 2011; Lédée N *et al*., 2008; Asimakopoulos B *et al*., 2006; Hammadeh ME *et al*., 2003B; Chen CD *et al*., 2000 | Expressed by GCs (Yoo *et al*., 2011); (Kawasaki *et al*., 2003) (Salmassi *et al*., 2001);  Play an important role in oocyte maturation (Kawasaki *et al*., 2003);  More abundant in HFF than in HP (SERUM) (Kawasaki *et al*., 2003) (Salmassi *et al*., 2001). |
| **341** | Interleukin-6 receptor subunit beta | NP\_002175.2 | P40189 | 28610147 | **IL6ST**  **gp 130** | LC-MS/MS | Yoo SW *et al*., 2011 |  |
| **342** | Interleukin-8 | NP\_000575.1 | P10145 | 10834978 | **CXCL8**  **IL8** | Gene chip assay; ELISA; Multiplex sandwich immunoassay; solid-phase chemiluminiscent enzyme immonuassy system | Lédée N *et al*., 2011; Yoo SW *et al*., 2011; Lédée N *et al*., 2008; Hammadeh ME *et al*., 2003A; Fujii A *et al*., 2003; Runesson O *et al*., 2000; Chen CD *et al*., 2000 | Expressed by GCs (Yoo, 2011);  It is secreted from corpus luteum and may play an important role in inducing endothelial permeability of OHSS (Chen, 2010);  Its concentration is correlated with follicular size (Malizia *et al.*, 2010). |
| **343** | Interleukin-9 | NP\_000581.1 | P15248 | 10834980 | **IL9**  **IL-9** | Multiplex sandwich immunoassay | Lédée N *et al*., 2011 |  |
| **344** | Interleukin-10 | NP\_000563.1 | P22301 | 10835141 | **IL10**  **IL-10** | LC-MS/MS gene chip assay; ELISA; Multiplex sandwich immunoassay | Yoo SW *et al*., 2011; Lédée N *et al*., 2011; Lédée N *et al*., 2008; Gazvani MR *et al*., 2000 | Expressed by GCs (Yoo *et al*., 2011);  Negatively related to ongoing pregnancy in IVF (Bonetti *et al*., 2010) (Cerkiene *et al*., 2008). |
| **345** | Interleukin-11 | NP\_000632.1 | **P20809** | 10834994 | **IL11**  **IL-11** | ELISA | Lédée-Bataille N *et al*., 2001 |  |
| **346** | Interleukin-12  heterodimer:  Interleukin-12 subunit alpha  +  Interleukin-12 subunit beta | NP\_000873.2  NP\_000873.2 | P29459  P29460 | 10834994  24430219 | **IL12A**  **IL-12 alpha**  **IL12B**  **IL-12 beta** | ELISA; EIA; Multiplex sandwich immunoassay | Lédée N *et al*., 2008; Vujisic S *et al*., 2006; Gallinelli A *et al*., 2003; Gazvani MR *et al*., 2000; Lédée-Bataille N *et al*., 2001 | Associated with a poor pregnancy rate (Gazvani *et al*., 2002) (Bedaiwyv *et al*., 2007);  High levels are present in HFF, corrisponding to embryos with high implantation potential (Lédée *et al*., 2008). |
| **347** | Interleukin-13 |  | P35225.2  (P35225) | 239938644 | **IL13**  **IL-13** | ELISA; Multiplex sandwich immunoassay | Lédée N *et al*., 2008; Gallinelli A *et al*., 2003; Lédée-Bataille N *et al*., 2001 |  |
| **348** | Interleukin-15 | NP\_000576.1 | P40933 | 10835153 | **IL15**  **IL-15** | EIA; Multiplex sandwich immunoassay | Vujisic S *et al*., 2006; Lédée-Bataille N *et al*., 2001 |  |
| **349** | Interleukin-18 | NP\_001553.1 | **Q14116** | 4504653 | **IL18**  **IL-18** | ELISA; EIA | Kilic S *et al*., 2009; Vujisic S *et al*., 2006 |  |
| **350** | Interleukin-18-binding protein | NP\_001034748.1 | **O95998** | 89111125 | **IL18BP**  **IL-18BP** | ELISA | Kilic S *et al*., 2009 |  |
| **351** | Interstitial collagenase | NP\_002412.1 | **P03956** | 4505215 | **MMP1**  **MMP-1** | Gel electrophoresis; Zymography; Western Blot | Lahav-Baratz S *et al*., 2003 |  |
| **352** | Intracellular adhesion molecule-1 (Soluble) | Not specified | Not specified | Not specified | Not specified | ELISA | Hammadeh ME *et al.*, 2004; Viganò P *et al.*, 1998 | Serum or FF concentration was not related with ICSI outcome (Hammadeh *et al*., 2004);  Produced by GCs, it is positively correlated with follicular size, the number of retrieved oocytes, and the number of follicles with a diameter of >15 mm (Viganò *et al*., 1998). |
| **353** | Kallikrein-6 | NP\_002765.1 | **Q92876** | 4506155 | KLK6  Kallikrein 6 (Neurosin) | ELISA | Shaw JL *et al*., 2007 |  |
| **354** | Kallistatin | NP\_006206.2 | P29622 | 21361302 | SERPINA4  Kallistatin | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **355** | Kelch-like protein 24 | NP\_060114.2 | **Q6TFL4** | 40018614 | KLHL24 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **356** | Keratin, type I cytoskeletal 9 | NP\_000217.2 | P35527 | 55956899 | KRT9 | 2DE/MALDI ToF MS; LC-MS/MS | Bianchi L *et al*., 2013; Yoo SW *et al.*, 2011 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013). |
| **357** | Keratin, type I cytoskeletal 10 | NP\_000412.3 | **P13645** | 195972866 | KRT10  Keratin 10 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **358** | Keratin, type I cytoskeletal 14 | NP\_000517.2 | **P02533** | 15431310 | KRT14  Keratin 14 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **359** | Keratin, type II cytoskeletal 1 | NP\_006112.3 | P04264 | 119395750 | KRT1  Keratin 1 | 2DE/MALDI ToF MS | Bianchi L *et al*., 2013 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013). |
| **360** | Keratin, type II cytoskeletal 2 epidermal | NP\_000414.2 | **P35908** | 47132620 | KRT2  Keratin 2 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **361** | Keratin, type II cytoskeletal 4 | P19013.4 | P19013.4  **(P19013)** | 82654947 | KRT4  Keratin 4 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **362** | Keratin, type II cytoskeletal 5 | NP\_000415.2 | **P13647** | 119395754 | KRT5  Keratin 5 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **363** | Keratin, type II cytoskeletal 6C | NP\_775109.2 | **P48668** | 155969697 | KRT6C  Keratin 6C | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **364** | Kinesin-like protein KIF27 | NP\_060046.1 | **Q86VH2** | 30794488 | KIF27 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **365** | Kininogen-1 | NP\_001095886.1 | P01042 | 156231037 | KNG1  KNG | 2DE/MALDI ToF MS; Nano-LC-MS/MS; 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS; 2DLC/MALDI ToF; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013; Lo Turco EG *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Jarkovska K *et al*., 2011; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Down-regulated in patients affected by OHSS (Jarkovska *et al*., 2011);  Found in non pregnancy patients with endometriosis (Lo Turco *et al*., 2013). |
| **366** | Kit ligand | NP\_000890.1 | P21583 | 4505175 | MMP3  Stromelysin-1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; ELISA | Ambekar AS *et al*., 2013; Salmassi A *et al*., 2011; Hammadeh ME *et al*., 2004 | Its serum or FF concentration was not related with ICSI outcome (Hammadeh *et al*., 2004);  May be a predictor of IVF outocome (Salmassi *et al*., 2011);  Involved in follicle development (Salmassiv, 2011). |
| **367** | Krueppel-like factor 17 | NP\_775755.3 | **Q5JT82** | 104294874 | KLF17 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **368** | Lactotransferrin | NP\_001186078.1 | P02788 | 312433998 | LTF  Lactoferrin | Nano-LC MALDI ToF/ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; ELISA | Ambekar AS *et al*., 2013; Hanrieder J *et al*., 2008; [Yanaihara A](http://www.ncbi.nlm.nih.gov/pubmed?term=Yanaihara%20A%5BAuthor%5D&cauthor=true&cauthor_uid=17094987) *et al*., 2007 | May be related to fertilization rate and embryo quality (Yanaihara *et al*., 2007). |
| **369** | Laminin subunit alpha-1 | NP\_005550.2 | P25391 | 38788416 | LAMA1 | 2DE/LC-MS/MS; LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012; Yoo SW *et al*., 2011 |  |
| **370** | Laminin subunit beta-2 | NP\_002283.3 | P55268 | 119703755 | LAMB2  Lamin B2 | 2DE/LC-MS/MS; LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012; Yoo SW *et al*., 2011 |  |
| **371** | Laminin subunit gamma-1 | NP\_002284.3 | P11047 | 145309326 | LAMC1  LAMG1 | LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al*., 2011 |  |
| **372** | Lebercilin | NP\_859065.2 | **Q86VQ0** | 170650670 | LCA5 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **373** | Leptin | NP\_000221.1 | P41159 | 4557715 | LEP  Leptin | RIA; ELISA; leptin immunometric EIA; IRMA | Hill MJ *et al*., 2007; Li MG *et al*., 2007; Asimakopoulos B *et al*., 2006; Asimakopoulos B *et al*., 2005; Anifandis G *et al*., 2005A; Anifandis G *et al*., 2005B; Wunder DM *et al*., 2005; Nikolettos N *et al*., 2004; Choi D *et al*., 2003; Dorn C *et al*., 2003; Abbas MM *et al*., 2003; Welt CK *et al*., 2003; Welt CK *et al*., 2002; Mantzoros CS *et al*., 2000 | Synthesized predominantly by fat cells (Bohler *et al*., 2010);  May have a function in steroidogenesis (Bohler *et al*., 2010);  Suppressed AMH expression (Merhi *et al*., 2013);  Discovered in blastocyst conditioned media in studies of embryo and endometrial ephitelial cell interaction (González *et al*., 2000);  TNF-α, IL-1, TGF-β regulated secretion (González *et al*., 2000);  Inhibits IGF-1 produced by GCs and theca cells (Agarwal *et al*., 1999);  Overexpressed in obese women with ovary dysfunction, has probable consequence of its inhibitory activity on AMH mRNA expression (Merhi *et al*., 2013);  Positively correletaded with fertilization rate (De Placido *et al*., 2006), but not with the IVF outcame (Asimakopoulos *et al*., 2008);  Crucial for oocyte development competence and fertilization (van Tol *et al*., 2010);  Elevated leptin concentrations were associated with reduced ovarian stimulation and response, follicle maturation, embryo quality and pregnancy success (Anifandis *et al*., 2005B);  It is lowly interrelated with markers of oocyte quality, fertilization, or embryo grade (Welt *et al*., 2002). |
| **374** | Leucine-rich alpha-2-glycoprotein | NP\_443204.1 | P02750 | 16418467 | LRG1  LRG | 2DE/MALDI ToF MS; 2DE/LC-MS/MS; CE-MALDI ToF/ToF MS; LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013; Twigt J *et al*., 2012; Yoo SW *et al*., 2011; Hanrieder J *et al*., 2009; Angelucci S *et al.*, 2006 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Some isoforms are less abundant in HFF than in HP (Angelucci *et al*., 2006). |
| **375** | Leucine zipper protein 1 | NP\_361013.3 | **Q86V48** | 216548085 | LUZP1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **376** | Leukemia inhibitory factor  (LIF; Lédée N *et al*., 2008) | NP\_002300.1 | P15018 | 4504991 | LIF | ELISA | Lédée N *et al*., 2008; Lédée-Bataille N *et al*., 2001 | Correlated with embryo quality and development (Lédée-Bataille *et al*., 2001). |
| **377** | LIM domain and actin-binding protein 1 | NP\_057441.1 | **Q9UHB6** | 7705373 | LIMA1  EPLIN | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **378** | LINE-1 type transposase domain-containing protein 1 | NP\_061952.3 | **Q5T7N2** | 157694505 | L1TD1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **379** | Lipocalin-1 | NP\_002288.1 | **P31025** | 4504963 | LCN1  Not supported by MetaCore | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **380** | Lipopolysaccharide-binding protein | NP\_004130.2 | P18428 | 31652249 | LBP | 2DE/LC-MS/MS; LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012; Yoo SW *et al*., 2011 |  |
| **381** | Lipoprotein lipase | NP\_000228.1 | P06858 | 4557727 | LPL | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **382** | L-lactate dehydrogenase A chain | NP\_001158888.1 | **P00338-5**  **(P00338)** | 260099727 | LDHA | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **383** | L-lactate dehydrogenase B chain | NP\_001167568.1 | **P07195** | 291575128 | LDHB | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **384** | L-selectin | NP\_000646.2 | P14151 | 262206315 | SELL  L-selectin | 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS | Twigt J *et al*., 2012; Hanrieder J *et al*., 2008 |  |
| **385** | Lumican | NP\_002336.1 | P51884 | 4505047 | LUM  Lumican | 2DE/LC-MS/MS; LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012; Yoo SW *et al*., 2011 |  |
| **386** | Luteinizing hormone (LH):  Glycoprotein hormones alpha chain  +  Lutropin subunit beta | NP\_001239312.1  NP\_000885.1 | P01215  P01229 | 356874784  4504989 | CGA  CG alpha  LHB  LH-beta | ELFA | Barberi M *et al*., 2012 | Occurs in the late phase of follicular development (Barberi *et al*., 2012);  Determine an increase of TGF-β and a decrease of AMH (Barberi *et al*., 2012). |
| **387** | Lymphatic vessel endothelial hyaluronic acid receptor 1 | NP\_006682.2 | **Q9Y5Y7** | 40549451 | LYVE1  LIVE-1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **388** | Lymphoid-restricted membrane protein | NP\_006143.2 | **Q12912** | 42789729 | LRMP | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **389** | Lysosomal-trafficking regulator | NP\_000072.2 | **Q99698** | 54292123 | LYST | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **390** | Lysosome-associated membrane glycoprotein 2 | NP\_002285.1 | **P13473** | 4504957 | LAMP2 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **391** | Lysozyme C | NP\_000230.1 | P61626 | 4557894 | LYZ  Lysozyme | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 | It is probably an antimicrobial agent in FF (Stepanović *et al*., 2003). |
| **392** | Macrophage colony-stimulating factor 1  (M-CSF; Salmassi A *et al*., 2005A; Kawano *et al*., 2001) | NP\_066278.2 | P09603 | 31543212 | CSF1 | LC-MS/MS; ELISA | Yoo SW *et al*., 2011; Salmassi A *et al*., 2010; Salmassi A *et al*., 2005B; Kawano Y *et al*., 2001 | May play an important role in human preovulatory processes (Kawano *et al*., 2001);  Involved in follicle development and ovulation and could be an additional predictor for IVF outcome (Salmassi *et al*., 2005B). |
| **393** | Macrophage colony-stimulating factor 1 receptor | NP\_005202.2 | **P07333** | 27262659 | CSF1R  M-CSF receptor | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **394** | Macrophage metalloelastase | NP\_002417.2 | P39900 | 73858572 | MMP12  MMP-12 | 2DE/MALDI ToF MS | Bianchi L *et al*., 2013 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013). |
| **395** | Macrophage migration inhibitory factor | NP\_002406.1 | **P14174** | 4505185 | MIF | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **396** | Malate dehydrogenase, cytoplasmic | NP\_001186041.1 | P40925-2  (**P40925)** | 312283703 | MDH1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **397** | Mannan-binding lectin serine protease 1 | NP\_001870.3 | **P48740** | 21264357 | MASP1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **398** | Mannan-binding lectin serine protease 2 | NP\_006601.2 | O00187 | 21264363 | MASP2 | LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al.*, 2013 | Supposed to be produced by granulosa cells, involved in oocyte maturation (Yoo *et al*., 2013). |
| **399** | Mannose-binding protein C | NP\_000233.1 | **P11226** | 4557739 | **MBL2** | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **400** | Mannosyl-oligosaccharide 1,2-alpha-mannosidase IA | NP\_005898.2 | P33908 | 24497519 | MAN1A1  MA1A1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **401** | Matrix metalloproteinase-9 | NP\_004985.2 | P14780 | 74272287 | MMP9  MMP-9 | 2DE/MALDI ToF MS; In gel zymografy; ELISA; Gel electrophoresis/zymography/Western Blot | Bianchi L *et al*., 2013; Horka P *et al*., 2012; Baka S *et al*., 2009; Lee DM *et al*., 2005; Lahav-Baratz S *et al*., 2003 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Higher expression in the preovulatory FF in association with higher implantation and pregnancy rate (Lee *et al*., 2005);  It is upregulated in PCOS patients (Baka *et al*., 2009);  Could be a good predictor of the success in IVF outcome (Horka *et al*., 2012). |
| **402** | Matrix metalloproteinase-25 | NP\_071913.1 | Q9NPA2 | 11968059 | MMP25  MMP-25 | 2DE/MALDI ToF MS | Bianchi L *et al*., 2013 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013). |
| **403** | Membrane-associated guanylate kinase, WW and PDZ domain-containing protein 3 | NP\_690864.2 | Q5TCQ9.2  (Q5TCQ9) | 190359882 | MAGI3  MAGI-3 | LC-MS/MS | Yoo SW *et al*., 2011 |  |
| **404** | Metalloproteinase inhibitor 1 | NP\_003245.1 | P01033 | 4507509 | TIMP1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/LC-MS/MS; Gel electrophoresis/zymography/Western Blot | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012; Lahav-Baratz S *et al*., 2003 |  |
| **405** | Metalloproteinase inhibitor 2 | NP\_003246.1 | **P16035** | 4507511 | **TIMP2** | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **406** | Methylmalonate-semialdehyde dehydrogenase [acylating], mitochondrial | NP\_005580.1 | **Q02252** | 11095441 | ALDH6A1  MMSA | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **407** | Midkine | NP\_002382.1 | P21741 | 4505135 | MDK  midkine | ELISA | Hirota Y *et al*., 2005 | Involved in GCs proliferation, estradiol production and developing follicles (Hirota *et al*., 2005). |
| **408** | Mimecan | NP\_148935.1 | **P20774** | 14916498 | OGN  Osteoglycin | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **409** | Moesin (MSN gene name) | NP\_002435.1 | **P26038** | 4505257 | MMSN **Not supported by MetaCore** | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **410** | Monocyte differentiation antigen CD14  (CD14 molecule; Ambekar AS *et al*., 2013) | NP\_002336.1 | P08571 | 4557417 | CD14 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/LC-MS/MS; LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012; Yoo SW *et al.*, 2011 |  |
| **411** | MORC family CW-type zinc finger protein 2 | NP\_055756.1 | Q9Y6X9 | 7662340 | MORC2 | Nano-LC-MS/MS | Kushnir MM *et al.*, 2012 |  |
| **412** | Muellerian-inhibiting factor | NP\_000470.2 | P03971 | 157266298 | AMH | ELISA; Ultrasensitive enzyme-linked immunosorbent assay, enzyme imunoassay | Jeppesen JV *et al*., 2013; Fuentes A *et al*., 2012; [Arabzadeh S](http://www.ncbi.nlm.nih.gov/pubmed?term=Arabzadeh%20S%5BAuthor%5D&cauthor=true&cauthor_uid=20940513) *et al*., 2012; Kaya A *et al*., 2012; Campos CS *et al*., 2010; Jancar N *et al*., 2009; Dumesic DA *et al*., 2009; Yding Andersen C *et al*., 2008; Das M *et al*., 2008; Lee JR *et al*., 2008; Takahashi C *et al*., 2007; Wunder DM *et al*., 2008; Fanchin R *et al*., 2007; Andresen CY *et al*., 2006 | Produced by GCs (Seifer *et al*., 2007);  FF AMH concentrations have been negatively correlated with FF estradiol concentrations in PCOS patients (Pabuccu *et al*., 2009);  To high levels of FF AMH corrisponde high clinical pregnancy rates, embryo implantation rates, and fertilization rates in PCOS patients (Pabuccu *et al*., 2009);  Its concentration in HFF positively correlated with its gene expression in the GCs and follicles (Jeppesen *et al*., 2013);  Positively correlated with inhibin B (Welt *et al*., 1997);  Highly expressed in women with PCOS ([Arabzadeh](http://www.ncbi.nlm.nih.gov/pubmed?term=Arabzadeh%20S%5BAuthor%5D&cauthor=true&cauthor_uid=20940513) *et al*., 2010);  Could be a prediction marker for fertilization (Takahashi *et al*., 2007);  It is a member of TGF-superfamily (Takahashi *et al*., 2007). |
| **413** | Multidrug resistance-associated protein 7 | NP\_258261.2 | **Q5T3U5-2**  **(Q5T3U5)** | 25914749 | **ABCC10** | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **414** | Multimerin-2 | NP\_079032.2 | **Q9H8L6** | 221316695 | MMRN2 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **415** | Multiple inositol polyphosphate phosphatase 1 | NP\_004888.2 | Q9UNW1 | 19923761 | MINPP1  MINP1 | Nano-LC-MS/MS; 2DE/LC-MS/MS | Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012 |  |
| **416** | Myocilin | NP\_000252.1 | **Q99972** | 4557779 | MYOC  Myocilin | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **417** | Myozenin-2 | NP\_057683.1 | **Q9NPC6** | 7706595 | MYOZ2 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 | Involved in follicular fluid formation, ECM remodelling during folliculogenesis, steroidogenesis and ovulation (Ambekar *et al*., 2013). |
| **418** | N-acetylglucosamine-1-phosphotransferase subunit gamma | NP\_115909.1 | **Q9UJJ9** | 14249738 | GNPTG | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **419** | N-acetylmuramoyl-L-alanine amidase | NP\_443122.3 | Q96PD5 | 156616294 | PGLYRP2  PGRP-L | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **420** | Nebulin | NP\_004534.2 | P20929 | 115527120 | NEB  Nebulin | CE-MALDI ToF/ToF MS | Hanrieder J *et al*., 2009 |  |
| **421** | Neural cell adhesion molecule L1-like protein | NP\_006605.2 | **O00533** | 27894376 | CHL1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **422** | Neural cell adhesion molecule 1 | NP\_001229537.1 | **P13591.4**  **(P13591)** | 336285443 | NCAM1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **423** | Neuronal pentraxin-2 | NP\_002514.1 | P47972 | 28195384 | NPTX2 | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **424** | Neuropathy target esterase | NP\_001159583.1 | Q8IY17 | 260656037 | PNPLA6  NTE | Nano-LC MALDI ToF/ToF MS | Hanrieder J *et al*., 2008 |  |
| 425 | Neuropilin-1 | O14786.3 | O14786.3  (**O14786)** | 206729912 | NRP1  Neuropilin-1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| 426 | Neuroplastin | NP\_036560.1 | Q9Y639 | 6912646 | NPTN  SDFR1 | ELISA | Nishigaki A *et al*., 2011B | Angiogenic factor produced by TCs and GCs and directly correlated with follicle dimensions and oocyte maturation (Nishigaki *et al*., 2011B). |
| 427 | Neurotensin/neuromedin N | NP\_006174.1 | **P30990** | 5453816 | NTS  LargeNT | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **428** | Neutral alpha-glucosidase C | NP\_937784.2 | **Q8TET4** | 66346737 | GANC | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **429** | Neutrophil defensin 1 | NP\_001035965.1 | **P59665** | 124248516 | DEFA1B  Alpha-defensin 1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; ELISA | Ambekar AS *et al*., 2013; Das S *et al*.,2008 | Its concentrations did not correlate with fertilisation rate or IVF outcome. It did not  show an increased expression of HNP1–3 in fluid of women with endometriosis (Das  *et al*., 2008). |
| **430** | Neutrophil defensin 3 | NP\_005208.1 | **P59666** | 4885179 | DEFA3  Alpha-defensin 3 | ELISA | Das S *et al*.,2008 | Its concentrations did not correlate with fertilisation rate or IVF outcome. It did not  show an increased expression of HNP1–3 in fluid of women with endometriosis (Das *et al*., 2008). |
| **431** | Neurotrophin-3 | NP\_001096124.1 | P20783 | 156630995 | NTF3  NT-3 | ELISA | Seifer DB *et al*., 2002B | Produced by GCs (Seifer *et al*., 2002B). |
| **432** | Neurotrophin-4 | NP\_006170.1 | P34130 | 5453808 | NTF4  NT-4/5 | ELISA | Seifer DB *et al*., 2002B | Produced by GCs (Seifer *et al*., 2002B). |
| **433** | Nidogen-2 | NP\_031387.3 | **Q14112** | 144953895 | NID2  Nidogen-2 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **434** | Noelin | NP\_055094.1 | **Q99784.3**  **(Q99784)** | 17136143 | OLFM1 Noelin | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **435** | Non-receptor tyrosine-protein kinase TYK2  (Tyrosine kinase 2) | NP\_003322.3 | **P29597** | 187608615 | TYK2 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **436** | Nuclear pore complex protein Nup133 | NP\_060700.2 | **Q8WUM0** | 26051235 | NUP133 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **437** | Nucleolar protein 6 | NP\_631981.2 | **Q9H6R4.3**  **(Q9H6R4)** | 22212931 | NOL6 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **438** | Olfactory receptor 9K2 | NP\_001005243.1 | **Q8NGE7** | 52546737 | OR9K2 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **439** | OTU domain-containing protein 4 | NP\_001096123.1 | **Q01804.4**  **(Q01804)** | 156630992 | OTUD4 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **440** | Outer dense fiber protein 3-like protein 2 | NP\_872383.1 | **Q3SX64** | 32698984 | ODF3L2 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **441** | Oxysterols receptor LXR-alpha | NP\_005684.2 | Q13133 | 194294517 | NR1H3  LXR-alpha | LC-MS/MS | Yoo SW *et al*., 2011 | Involved in LXR/RXR activation system (Yoo *et al*., 2011). |
| **442** | Paired mesoderm homeobox protein 2B | NP\_003915.2 | **Q99453** | 12707580 | PHOX2B  PMX2B | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **443** | Pantetheinase | NP\_004657.2 | **O95497** | **223633991** | VNN1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **444** | Pappalysin-1 | NP\_002572.2 | Q13219 | 38045915 | PAPPA  PAPP-A | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; ELISA; SDS-PAGE/Western Blot | Ambekar AS *et al*., 2013; Zhong G *et al*., 2011; Wang TH *et al*., 2006; Choi D *et al*., 2003; Conover CA *et al*., 2001 | Low levels suggest better oocyte maturation (Wang *et al*., 2006);  It is a marker of ovarian follicle selection and corpus luteum formation (Conover *et al*., 2001). |
| **445** | Pentraxin-related protein PTX3 | NP\_002843.2 | **P26022** | 167900484 | PTX3 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **446** | Pepsin A-3 | NP\_001073275.1 | **P0DJD8** | 119372298 | PGA3  Pepsin | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **447** | Peptidylglycine alpha-amidating monooxygenase | NP\_620176.1 | P19021.2  (P19021) | 21070980 | PAM | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **448** | Peptidyl-prolyl cis-trans isomerase A | NP\_066953.1 | P62937 | 10863927 | PPIA  Cyclophilin A | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **449** | Peptidyl-prolyl cis-trans isomerase B | NP\_000933.1 | P23284 | 4758950 | PPIB  Cyclophilin B | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **450** | Peptidyl-prolyl cis-trans isomerase C | NP\_000934.1 | **P45877** | 4505991 | PPIC  Cyclophilin C | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **451** | Peroxidasin homolog | NP\_036425.1 | Q92626 | 109150416 | PXDN | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **452** | Peroxiredoxin-1 | NP\_859048.1 | Q06830 | 32455266 | PRDX1 | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **453** | Peroxiredoxin-2 | NP\_005800.3 | P32119 | 32189392 | PRDX2 | LC-MS/MS; 2DE/MALDI ToF MS/Edman Degradation; 2DE/MALDI ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al.*, 2011; Lee HC *et al*., 2005; Anahory T *et al.*, 2002 | May be related to infertility (Anahory *et al*., 2002). |
| **454** | Peroxisomal acyl-coenzyme A oxidase 3  (Acyl-CoA oxidase 3, pristanoyl) | NP\_001095137.1 | **O15254.2**  **(O15254)** | 156104866 | ACOX3 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **455** | Phosphatidylcholine-sterol acyltransferase | NP\_000220.1 | P04180 | 4557892 | LCAT | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **456** | Phosphatidylethanolamine-binding protein 4 | NP\_659399.2 | **Q96S96** | 116812622 | PEBP4 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **457** | Phosphatidylinositol-glycan biosynthesis class F protein | NP\_002634.1 | **Q07326** | 4505797 | PIGF | ELISA | Gutman G *et al*., 2008 |  |
| **458** | Phosphatidylinositol-glycan-specific phospholipase D | NP\_001494.2 | **P80108** | 29171717 | **GPLD1**  **PHL1** | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **459** | Phosphatidylinositol 3,4,5-trisphosphate-dependent Rac exchanger 2 protein | NP\_079146.2 | **Q70Z35** | 47578115 | PREX2 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **460** | Phosphoglycerate kinase 1 | NP\_000282.1 | P00558 | 4505763 | PGK1 | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **461** | Phospholipid transfer protein | NP\_001229849.1 | P55058.3  (P55058) | 339275807 | PLTP | 2DE/LC-MS/MS; LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012; Yoo SW *et al*., 2011 | It is expressed by the GCs (Yoo *et al*., 2011);  Involved in LXR/RXR activation system (Yoo *et al*., 2011). |
| **462** | Phosphorylase b kinase regulatory subunit alpha, liver isoform | NP\_000283.1 | P46019 | 4505781 | PHKA2  PHK alpha (liver) | Nano-LC MALDI ToF/ToF MS | Hanrieder J *et al*., 2008 |  |
| **463** | Pigment epithelium-derived factor | NP\_002606.3 | P36955 | 39725934 | SERPINF1  PEDF (serpinF1) | 2DE/MALDI ToF MS; 2DE/LC-MS/MS; 2DE/LC-MS/MS | Bianchi L *et al*., 2013; Twigt J *et al*., 2012; Yoo SW *et al*., 2011; Jarkovska K *et al*., 2011 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Upregulated in patients affected by OHSS (Jarkovska *et al*., 2011). |
| **464** | Pituitary adenylate cyclase-activating polypeptide  (Pituitary adenylate cyclase-activating polypeptide 38; Brubel R *et al*., 2011) | NP\_001093203.1 | **P18509** | 153266792 | PACAPCD4 | RIA; MALDI ToF/ToF MS | Koppan M *et al*., 2012; Brubel R *et al*., 2011 | Produce by TCs and GCs (Brubel *et al*., 2011);  Plays an important role in primordial germ cell proliferation, cyclic recruitment of immature follicles, follicular apoptosis and meiotic maturation of the oocytes (Brubel *et al*., 2011);  Higher concentrations might be associated with lower number of developing ooytes, while low concentrations might correlate with a markedly higher number of ova retrieved (Koppan *et al*., 2012). |
| **465** | Placenta-specific protein 4 | NP\_878252.2 | **Q8WY50** | 121949815 | PLAC4 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **466** | Plakophilin-2 | NP\_004563.2 | Q99959 | 148664226 | PKP2  Plakophilin 2 | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **467** | Plasma kallikrein | NP\_000883.2 | P03952 | 78191798 | KLKB1  Plasma kallikrein | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **468** | Plasma protease C1 inhibitor | NP\_000053.2 | P05155 | 73858568 | SERPING1  C1 inhibitor | 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS | Twigt J *et al*., 2012; Hanrieder J *et al*., 2008 |  |
| **469** | Plasma serine protease inhibitor | NP\_000615.3 | P05154 | 194018472 | SERPINA5  Protein C inhibitor | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **470** | Plasminogen | NP\_000292.1 | P00747 | 4505881 | PLG  Plasminogen | 2DE/MALDI ToF MS; Nano-LC-MS/MS; 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Yoo SW *et al*., 2011; Hanrieder J *et al*., 2008; Angelucci S *et al.*, 2006 | Some isoforms are more abundant in HFF than in HP (Angelucci *et al*., 2006). |
| **471** | Plasminogen activator inhibitor 1 | NP\_000593.1 | P05121 | 10835159 | SERPINE1  PAI1 | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **472** | Plastin-2 | NP\_002289.2 | P13796 | 167614506 | LCP1  Plastin | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **473** | Platelet-derived growth factor (PDGF):  Platelet-derived growth factor subunit A  Platelet-derived growth factor subunit B | NP\_002598.4  NP\_002599.1 | P04085  **P01127** | 77695917  4505681 | PDGFA  PDGF-A  PDGFB  PDGF-B | Multiplex sandwich immunoassay; ELISA  ELISA | Lédée N *et al*., 2011; Hammadeh ME *et al*., 2003B  Hammadeh ME *et al*., 2003B |  |
| **474** | Platelet endothelial cell adhesion molecule | NP\_000433.4 | **P16284** | 313760624 | PECAM1 | ELISA | Benifla JL *et al*., 2001 |  |
| **475** | Poly [ADP-ribose] polymerase 6 | NP\_064599.2 | **Q2NL67** | 94536838 | PARP6  PARP-6 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **476** | Polypeptide N-acetylgalactosaminyltransferase 3 | NP\_004473.2 | **Q14435** | 153266878 | **GALNT3** | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **477** | Polyubiquitin-B  (Ubiquitin B) | NP\_061828.1 | **P0CG47** | 11024714 | **UBB**  **Not supported by MetaCore** | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **478** | Potassium channel subfamily K member 12 | NP\_071338.1 | **Q9HB15** | 11545761 | KCNK12 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **479** | POTE ankyrin domain family member E | NP\_001077007.1 | **Q6S8J3** | 134133226 | POTEE  A26C1A | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **480** | Pregnancy zone protein | NP\_002855.2 | P20742 | 162809334 | PZP | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **481** | Pre-mRNA-processing factor 6 | NP\_036601.2 | O94906 | 40807485 | PRPF6  U5-102 kDa | Nano-LC-MS/MS | Kushnir MM *et al.*, 2012 |  |
| **482** | Probable ATP-dependent RNA helicase DDX46  (DEAD (Asp-Glu-Ala-Asp) box polypeptide 46) | NP\_055644.2 | Q7L014 | 41327773 | DDX46 | Nano-LC-MS/MS | Kushnir MM *et al.*, 2012 |  |
| **483** | Probable ATP-dependent RNA helicase DDX56 | NP\_061955.1 | **Q9NY93** | 9506931 | DDX56 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **484** | Probable G-protein coupled receptor 97 | NP\_740746.4 | Q86Y34 | 229093087 | ADGRG3  GPR97 | CE-MALDI ToF/ToF MS | Hanrieder J *et al*., 2009 |  |
| **485** | Probable tubulin polyglutamylase TTLL1 | NP\_036395.1 | **O95922** | 11068135 | TTLL1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **486** | Procollagen C-endopeptidase enhancer 1 | NP\_002584.2 | Q15113 | 157653329 | PCOLCE | LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al*., 2011 |  |
| **487** | Pro-epidermal growth factor  (EGF, Inoue Y *et al*., 2009) (EGF –like growth factor; Zamah AM *et al*., 2010) | NP\_001954.2 | **P01133** | 166362728 | EGF | ELISA | Liu N *et al*., 2012; Zamah AM *et al*., 2010; Inoue Y *et al*., 2009; Hammadeh ME *et al*., 2003A; Hammadeh ME *et al*., 2003B | It is a EGF receptor ligand (Inoue *et al*., 2009);  Higher concentration in HP than HFF (Inoue *et al*., 2009);  May be important at an early stage of oocyte maturation (Goud *et al*., 1998);  Positively correlated with follicle size (Reeka *et al*., 1998). |
| **488** | Profilin-1 | NP\_005013.1 | **P07737** | 4826898 | PFN1  Profilin I | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **489** | Prokineticin-1  [Endocrine-gland-derived VEGF] | NP\_115790.1 | P58294 | 14165282 | PROK1  EG-VEGF | ELISA | Gao MZ *et al*., 2011 | Ovary is the organ with the highest production of EG-VEGF, expressed predominantly by GCs and TCs (Gao *et al*., 2012);  Associated to ovarian response and ovarian hyperstimulation syndrome (OHSS) (Gao *et al*., 2011);  In IVF undergone patients its concentration is higher in FF than in serum (blood sampling two days after OR) (Gao *et al*., 2011). |
| **490** | Prolactin | NP\_000939.1 | P01236 | 4506105 | PRL  Prolactin | RIA | Ohwaki M *et al*., 1992 | Higher PRL concentrations have been detected in follicles yielding oocytes that show normal fertilization (Mendoza *et al*., 1999). |
| **491** | Pro-opiomelanocortin | NP\_000930.1 | P01189 | 4505949 | POMC | HPLC/RIA | Facchinetti F *et al*., 1988 |  |
| **492** | Properdin | NP\_001138724.1 | **P27918** | 223671861 | CFP  Properdin | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al.*, 2013 | Supposed to be produced by granulosa cells, involved in oocyte maturation (Yoo *et al*., 2013). |
| **493** | Proprotein convertase subtilisin/kexin type 9 | NP\_777596.2 | **Q8NBP7** | 31317307 | PCSK9 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **494** | Prostaglandin-H2 D-isomerase | NP\_000945.3 | **P41222** | 32171249 | **PTGDS**  **PGHD** | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **495** | Prostatic acid phosphatase | NP\_001090.2 | **P15309** | 6382064 | ACPP  PPAP | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **496** | Proteasome subunit alpha type-5 | NP\_002781.2 | **P28066** | 23110942 | PSMA5 | 2DE/LC-MS/MS | Lo Turco EG *et al*., 2013 | Found in non pregnancy patients with endometriosis (Lo Turco *et al*., 2013). |
| **497** | Proteasome subunit beta type-2 | NP\_002785.1 | **P49721** | 4506195 | PSMB2 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **498** | Protein AMBP  (Alpha-1-microglobulin; Angelucci S *et al.*, 2006; Alpha-1-microglobulin/bikunin; Ambekar AS *et al*., 2013; Kushnir MM *et al.*, 2012) | NP\_001624.1 | P02760 | 4502067 | AMBP  A1M | 2DE/MALDI ToF MS; Nano-LC-MS/MS; 2DE/LC-MS/MS; Seldi ToF/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Schweigert FJ *et al.*, 2006 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Some isoforms are more abundant in HFF than in HP (Angelucci *et al*., 2006). |
| **499** | Protein asunder homolog  (Asunder, spermatogenesis regulator) | NP\_060634.2 | **Q9NVM9** | 155030185 | ASUN  C12orf11 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **500** | Protein BEX5 | NP\_001012996.1 | **Q5H9J7** | 61175244 | BEX5 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **501** | Protein FRA10AC1 | NP\_660289.2 | **Q70Z53** | 24432067 | FRA10AC1  C10orf4 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **502** | Protein Jade-3 | NP\_055550.1 | Q92613 | 7662006 | JADE3  PHF16 | Nano-LC-MS/MS | Kushnir MM *et al.*, 2012 |  |
| **503** | Protein kinase C-binding protein NELL2 | NP\_001138582.1 | Q99435 | 223029476 | NELL2 | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **504** | Protein SZT2 | NP\_056099.3 | **Q5T011** | 335353804 | SZT2 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **505** | Protein S100-A8 | NP\_002955.2 | P05109 | 21614544 | S100A8  Calgranulin A | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **506** | Protein unc-79-homolog | NP\_065869.3 | **Q9P2D8** | 150456444 | UNC79  KIAA1409 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **507** | Protein Z-dependent protease inhibitor | NP\_057270.1 | Q9UK55 | 7705879 | SERPINA10  ZPI | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **508** | Prothrombin | NP\_000497.1 | P00734 | 4503635 | F2  Thrombin | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/MALDI ToF MS; Nano-LC-MS/MS; Nano-LC MALDI ToF/ToF MS; 2DE/LC-MS/MS | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Hanrieder J *et al*., 2008; Angelucci S *et al.*, 2006 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Some isoforms are more abundant in HFF than in HP (Angelucci *et al*., 2006). |
| **509** | Proton-coupled amino acid transporter 4 | NP\_689526.2 | **Q6YBV0** | 40807351 | **SLC36A4** | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **510** | Protransforming growth factor alpha (TGFα) | NP\_003227.1 | **P01135** | 4507461 | TGFA  TGF-alpha | ELISA | Inoue Y *et al*., 2009 | It is a EGF receptor ligand (Inoue *et al*., 2009);  Higher concentration in HP than HFF (Inoue *et al*., 2009);  It is predominantly present in TCs, GCs, SCs, and oocytes (Tamura *et al*., 1995) (Reeka *et al*., 1998). |
| **511** | Putative Polycomb group protein ASXL1 | NP\_056153.2 | **Q8IXJ9** | 29570782 | ASXL1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **512** | Rab GDP dissociation inhibitor beta | NP\_001485.2 | P50395 | 6598323 | GDI2 | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **513** | Retinoic acid receptor responser protein 2  (Chemerin) (Reverchon M *et al*., 2012) | NP\_002880.1 | Q99969 | 4506427 | RARRES2  TIG2 | 2DE/LC-MS/MS; ELISA; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012; Reverchon M *et al*., 2012 | Expressed by GCs and TCs (Reverchon *et al*., 2003);  Higher concentration in HFF than in HP on the day before the oocyte pick-up, wich indicates that chemerin has a paracrine effect in the process of oocyte development in women receiving IVF (Reverchon *et al*., 2003);  May be antagonize the effect of IGF-I (Reverchon *et al*., 2003). |
| **514** | Retinoic acid receptor RXR-alpha | NP\_002948.1 | P19793 | 4506755 | RXRA | LC-MS/MS | Yoo SW *et al*., 2011 | Involved in LXR/RXR activation system (Yoo *et al*., 2011). |
| **515** | Retinoic acid receptor RXR-beta | NP\_068811.1 | P28702 | 11415052 | RXRB | LC-MS/MS | Yoo SW *et al*., 2011 | Involved in LXR/RXR activation system (Yoo *et al*., 2011). |
| **516** | Retinol-binding protein 1 | NP\_002890.2 | P09455 | 195976807 | RBP1 | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **517** | Retinol-binding protein 4 | NP\_006735.2 | P02753 | 55743122 | RBP4 | 2DE/MALDI ToF MS; 2DE/LC-MS/MS; 2DE/MALDI ToF MS/Edman Degradation; CE-MALDI ToF/ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013; Twigt J *et al*., 2012; Jarkovska K *et al*., 2011; Hanrieder J *et al*., 2009; Weiping L *et al*., 2006; Anahory *et al.*, 2002 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Increased blood levels in PCOS patients (in blood) (Weiping *et al*., 2006);  Less abundant in HFF than in HP (Schweigert *et al*., 2003);  May be related to infertility (Anahory *et al*., 2002);  Blood retinol transport by interaction with transthyretin (Noy *et al*., 2000) (Monaco *et al*., 2000);  Down-regulated in patients affected by OHSS (Jarkovska *et al*., 2011). |
| **518** | Rhodopsin kinase | NP\_002920.1 | **Q15835** | 4506529 | **GRK1**  Rhodopsin kinase (GRK1) | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **519** | Rho guanine nucleotide exchange factor 18 | NP\_056133.2 | **Q6ZSZ5.3**  (Q6ZSZ5) | 41327769 | **ARHGEF18**  **p114-RhoGEF** | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **520** | Rho guanine nucleotide exchange factor 26 | NP\_056410.3 | **Q96DR7** | 194473700 | **ARHGEF26**  **SGEF** | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **521** | Rho guanine nucleotide exchange factor 37 | NP\_001001669.2 | A1IGU5 | 83715966 | ARHGEF37  FLJ41603 | Nano-LC-MS/MS | Kushnir MM *et al.*, 2012 |  |
| **522** | R3H and coiled-coil domain-containing protein 1-like | NP\_001243549.1 | Q7Z5L2.2  (Q7Z5L2) | 71648680 | R3HCC1L  C10orf28 | Nano-LC-MS/MS | Kushnir MM *et al.*, 2012 |  |
| **523** | Scavenger receptor cysteine-rich type 1 protein M130 | NP\_981961.2 | **Q86VB7** | 344179112 | CD163 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **524** | Secreted phosphoprotein 24 | NP\_008875.1 | **Q13103** | 5902118 | SPP2  SGPP2 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 | Involved in follicular fluid formation, ECM remodelling during folliculogenesis, steroidogenesis and ovulation (Ambekar *et al*., 2013). |
| **525** | Selenoprotein P | NP\_005401.3 | P49908 | 148277018 | SEPP1  Selenoprotein P | LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al*., 2011 |  |
| **526** | Serine/threonine-protein kinase | NP\_066278.3 | **Q13043** | 205277383 | STK4  (PAK3) | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **527** | Serine/threonine-protein kinase TAO1 | NP\_079418.1 | **Q7L7X3** | 315139026 | TAOK1  MARKK | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **528** | Serotransferrin | NP\_001054.1 | P02787 | 4557871 | TF | 2DE/MALDI ToF MS; Nano-LC-MS/MS; 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS; 1DE/Edman Degradation; Seldi ToF/MS; 2DLC/MALDI ToF SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Yoo SW *et al*., 2011; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008; Angelucci S *et al.*, 2006; Schweigert FJ *et al.*, 2006; Lee HC *et al*., 2005; Aleporou-Marinou V *et al*., 2002 | Correlated to IVF outcome (Kushnir *et al*., 2012);  Some isoforms are more abundant in HFF than in HP (Angelucci *et al*., 2006);  Expressed *de novo* by granulose cells (Hanrieder *et al*., 2009);  Supposed role in follicle development and maturation controlling ovarian steroidogenesis (progesterone suppression) (Kawano *et al*., 1995);  Supposed to be involved in the fertilization process (Aleporou-Marinou *et al*., 2002);  Expressed *de novo* by granulose cells (Hanrieder *et al*., 2009);  Supposed role in follicle development and maturation controlling ovarian steroidogenesis (progesterone suppression) (Kawano *et al*., 1995);  Supposed to be involved in the fertilization process (Aleporou-Marinou *et al*., 2002). |
| **529** | Serum albumin | NP\_000468.1 | P02768 | 4502027 | ALB | 2DE/MALDI ToF MS; 2DE/LC-MS/MS; CE-MALDI ToF/ToF MS; Nano-LC-MS/MS; Nano-LC MALDI ToF/ToF MS; Seldi ToF/MS; 2DLC/MALDI ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013; Lo Turco EG *et al*., 2013; Twigt J *et al*., 2012; Kushnir MM *et al.*, 2012; Jarkovska K *et al*., 2011; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008; Schweigert FJ *et al*., 2006; Angelucci S *et al*., 2006; Lee HC *et al*., 2005 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Correlated to IVF outcome (Kushnir *et al*., 2012);  Some isoforms are more abundant in HFF than in HP (Angelucci *et al*., 2006);  It is a carrier for thyroid hormone and vitamin A (McKinnon *et al*., 2005) (Belatik *et al*., 2012);  Involved in lipid transport (Simard *et al*., 2005) (Fujiwara *et al*., 2008);  Found in pregnancy patients with endometriosis (Lo Turco *et al*., 2013);  Found in non pregnancy patients with endometriosis (Lo Turco *et al*., 2013). |
| **530** | Serum amyloid A-2 protein | NP\_110381.2 | **P0DJI9** | 188497671 | SAA2 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **531** | Serum amyloid A-4 protein | NP\_006503.2 | P35542 | 315075333 | SAA4 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012; Hanrieder J *et al*., 2008 |  |
| **532** | Serum amyloid P-component | NP\_001630.1 | P02743 | 4502133 | APCS | 2DE/LC-MS/MS; PF2D Protein Fractionation-LC MS/MS; 2DE/MALDI ToF MS | Twigt J *et al*., 2012; Jarkovska K *et al*., 2011; Jarkovska K *et al*., 2010 | Some isoforms are more abundant in HP than in HFF (Jarkovska *et al*., 2010);  Down-regulated in patients affected by OHSS (Jarkovska *et al*., 2011). |
| **533** | Serum paraoxonase/arylesterase 1  (Paraxonase 1; Ambekar AS *et al*., 2013) | NP\_000437.3 | P27169 | 19923106 | PON1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; Nano-LC-MS/MS; Nano-LC MALDI ToF/ToF MS; LC-MS/MS; 2DE/LC-MS/MS | Ambekar AS *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Yoo SW *et al*., 2011; Hanrieder J *et al*., 2008 | Acts in concert with HDL-cholesterol and Apo AI, within the HDL particle to influence embryo morphology (Browne *et al*., 2008). |
| **534** | Serum paraoxonase/lactonase 3  (Paraxonase 3) | NP\_000931.1 | **Q15166** | 29788996 | PON3 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **535** | Sex hormone-binding globulin | NP\_001031.2 | P04278 | 7382460 | SHBG | 2DE/MALDI ToF MS; 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; RIA | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013; Twigt J *et al*., 2012; Hanrieder J *et al*., 2008; Lin KC *et al*., 2005 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Associated with follicle size (Hatzi *et al*., 2011);  May influence the relative circulating estrogen and androgen balance, resulting in superior uterine receptivity for embryo implantation during the luteal phase (Lin *et al*., 2005). |
| **536** | Short transient receptor potential channel 3 | NP\_003296.1 | **Q13507** | 4507687 | TRPC3 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **537** | Signal peptide, CUB and EGF-like domain-containing protein 1 | NP\_766638.2 | Q8IWY4 | 120587029 | SCUBE1 | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **538** | Somatotropin (GH) | NP\_000506.2 | P01241 | 13027812 | GH1  Somatotropin | RIA | Mendoza C. *et al*., 2002 | Positively correlated with both normal fertilization and preimplantation embryo morphology and cleavage speed (Mendoza *et al*., 1999);  GH signaling pathway absolves an important role during follicle and oocyte development for achieving viable pregnancy (Hull *et al*., 2001) (Kushnir *et al*., 2012). |
| **539** | SPARC | NP\_003109.1 | **P09486** | 4507171 | SPARC  Osteonectin | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **540** | Stanniocalcin-1 | NP\_003146.1 | **P52823** | 4507265 | STC1  Stanniocalcin-1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 | Regulates oocyte maturation and inhibites progesteron production (Ambekar, 2013). |
| **541** | Stromal cell-derived factor 1 | NP\_000600.1 | **P48061** | 10834988 | CXCL12  SDF-1 | ELISA | Nishigaki A *et al*., 2011A |  |
| **542** | Sulfhydryl oxidase 1 | NP\_002817.2 | O00391 | 13325075 | QSOX1  QSCN6 | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **543** | Superoxide dismutase [Cu-Zn] | NP\_000445.1 | P00441 | 4507149 | SOD1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **544** | Sushi repeat-containing protein SRPX | NP\_001164222.1 | P78539.3  (P78539) | 282721077 | SRPX | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **545** | Sushi repeat-containing protein SRPX2 | NP\_055282.1 | **O60687** | 7657619 | SRPX2  SRPUL | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **546** | Syndecan-4 | NP\_002990.2 | **P31431** | 38201675 | SDC4  Syndecan-4 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **547** | Talin-1 | NP\_006280.3 | **Q9Y490** | 223029410 | TLN1  Talin-1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **548** | Target of EGR1 protein 1 | NP\_079353.3 | **Q96GM8** | 156564398 | TOE1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **549** | Target of Nesh-SH3 | NP\_056244.2 | **Q7Z7G0** | 33667044 | **ABI3BP**  **TARSH** | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **550** | Tau-tubulin kinase 1 | NP\_115927.1 | **Q5TCY1** | 58761548 | **TTBK1**  Not supported by MetaCore | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **551** | T-box transcription factor TBX3 | NP\_057653.3 | O15119 | 47419907 | TBX3 | Nano-LC-MS/MS | Kushnir MM *et al.*, 2012 |  |
| **552** | T-complex protein 10A homolog | NP\_004601.3 | **Q12799** | 105553088 | TCP10 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **553** | Tenascin-X | NP\_061978.6 | P22105 | 188528648 | TNXB  Tenascin-X | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 | Involved in follicular fluid formation, ECM remodelling during folliculogenesis, steroidogenesis and ovulation (Ambekar *et al*., 2013). |
| **554** | Testican-3 | NP\_001191285.1 | **B4DJY3** | 324120878 | SPOCK3 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **555** | Tetranectin | NP\_003269.2 | **P05452** | 156627579 | CLEC3B  Tetranectin | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al*., 2011 |  |
| **556** | Tetraspanin-14 | NP\_112189.2 | Q8NG11 | 190194420 | TSPAN14  Tetraspanin-14 | CE-MALDI ToF/ToF MS | Hanrieder J *et al*., 2009 |  |
| **557** | Tetratricopeptide repeat protein 34 | NP\_001229601.1 | **A8MYJ7** | 336455091 | TTC34 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **558** | TGF-beta receptor type-2 | NP\_003233.4 | **P37173** | 67782324 | TGFBR2  TGF-beta receptor type II | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **559** | Thioredoxin | NP\_003320.2 | **P10599** | 50592994 | TXN  Thioredoxin | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **560** | Thrombospondin type-1 domain-containing protein 7B | NP\_001073896.1 | **Q9C0I4** | 122937257 | THSD7B  KIAA1679 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **561** | Thrombospondin-1 | NP\_003237.2 | P07996 | 40317626 | THBS1  Thrombospondin-1 | 2DE/LC-MS/MS; LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012; Yoo SW *et al*., 2011 |  |
| **562** | Thrombospondin-4 | NP\_003239.2 | P35443 | 31543806 | THBS4  Thrombospondin-4 | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **563** | Thyroxine-binding globulin | NP\_000345.2 | P05543 | 205277441 | SERPINA7  Thyroxine-binding globulin | 2DE/LC-MS/MS | Twigt J *et al*., 2012 | Overwhelming majority of T4 (75%) and T3 (70%) in the bloodstream are veiculated by TBG (Mannavola *et al*., 2006) (Refetoff *et al*., 1996). |
| **564** | Tissue factor | NP\_001984.1 | **P13726** | 4503641 | F3  Tissue factor | EIA | Shimada H *et al*., 2001 |  |
| **565** | Tissue factor pathway inhibitor | NP\_006278.1 | **P10646** | 5454114 | TFPI | ELISA | Thyzel E *et al*., 2003 | Higher concentration in HFF of women undergoing IVF and ICSI (Thyzel *et al*., 2003). |
| **566** | Titin | NP\_001243779.1 | Q8WZ42.4  (Q8WZ42) | 384872704 | TTN  Titin | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **567** | Transferrin receptor protein 1 | NP\_003225.2 | P02786 | 189458817 | TFRC  TfR1 | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **568** | Transforming growth factor-beta-induced protein ig-h3 | NP\_000349.1 | Q15582 | 4507467 | TGFBI  Beta ig-h3 | 2DE/LC-MS/MS; LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; ELISA | Ambekar AS *et al*., 2013; Barberi M *et al*., 2012; Twigt J *et al*., 2012; Yoo SW *et al*., 2011 |  |
| **569** | Transforming growth factor beta receptor type 3 | NP\_003234.2 | Q03167 | 307574634 | TGFBR3  TGF-beta receptor type III (betaglycan) | LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Yoo SW *et al*., 2011 |  |
| **570** | Transforming growth factor beta-1 | NP\_000651.3 | **P01137** | 63025222 | TGFB1  TGF-beta 1 | ELISA | Gao MZ *et al*., 2012; Han M *et al*., 2011 | Essential for oocyte and early embryo development (Ingman *et al*., 2009);  Produced by GCS and LCs (Mulheron *et al*., 1992). |
| **571** | Transient receptor potential cation channel subfamily M member 7 | NP\_060142.3 | **Q96QT4** | 148612863 | TRPM7 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **572** | Transketolase-like protein 2 | NP\_115512.3 | **Q9H0I9** | 133778974 | TKTL2 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **573** | Translin-associated factor X-interacting protein 1 | NP\_060900.2 | **Q2TAA8** | 110227629 | TSNAXIP1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **574** | Transmembrane protein 169 | NP\_612399.1 | Q96HH4 | 19923913 | TMEM169 | CE-MALDI ToF/ToF MS | Hanrieder J *et al*., 2009 |  |
| **575** | Transthyretin | NP\_000362.1 | P02766 | 4507725 | TTR  Transthyretin | 2DE/MALDI ToF MS; Nano-LC-MS/MS; 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; 2DE/MALDI ToF MS/Edman Degradation; CE-MALDI ToF/ToF MS; Seldi ToF/MS; PF2D Protein Fractionation-LC MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Lo Turco EG *et al*., 2013; Bianchi L *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Jarkovska K *et al*., 2010; Hanrieder J *et al*., 2009; Hanrieder J *et al*., 2008; Schweigert FJ *et al*., 2006; Angelucci S *et al.*, 2006; Lee HC *et al*., 2005 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Correlated to IVF outcome (Kushnir *et al*., 2012);  May be related to infertility (Anahory *et al*., 2002);  Indirectly involved in vitamin A transport (interacting with RBP) (Noy *et al*., 2000);  Involved in thyroid hormones transport and thus indirectly correlated with thyroid hormones regulation of GCs, CC and oocyte (Zhang *et al*., 1997);  In a number of papers, subfertility/infertility has been related to thyroid autoimmunity and anti-thyroid hormone antibodies have been detected in the HFF (Monteleone *et al*., 2011) (Wakim *et al*., 1993) (Poppe *et al*., 2002) (de Silva *et al*., 1994) (Zhang *et al*., 1997) (Verga Falzacappa *et al*., 2009) (Poppe *et al*., 2008);  Some isoforms are more abundant in HFF than in HP (Jarkovska *et al*., 2010);  It is synthesized by human trophoblast (Mortimer *et al*., 2012);  Involved in vitamin A transport (Monaco *et al*., 2000). |
| **576** | Triggering receptor expressed on myeloid cells 1 | NP\_061113.1 | **Q9NP99** | 8924262 | TREM1 | ELISA | Haller-Kikkatalo K *et al*., 2012 | May be a prognostic marker for female fecundity (Haller-Kikkatalo *et al*., 2012). |
| **577** | Triosephosphate isomerase | NP\_000356.1 | P60174.3  (P60174) | 4507645 | TPI1 | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **578** | Tripeptidyl-peptidase 2 | NP\_003282.2 | **P29144** | 186972143 | TPP2 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **579** | Tubulin alpha-1B chain | NP\_006073.2 | P68363 | 57013276 | TUBA1B  Tubulin alpha-1B | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **580** | Tubulin beta chain | NP\_821133.1 | P07437 | 29788785 | TUBB  Tubulin beta 1 | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **581** | Tubulin gamma-1 chain | NP\_001061.2 | **P23258** | 31543831 | TUBG1  Tubulin gamma 1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **582** | Tumor necrosis factor | NP\_000585.2 | P01375 | 25952111 | TNF  TNF-alpha | LC-MS/MS; EIA; ELISA; Multiplex sandwich immunoassay; Solid-phase chemiluminiscent enzyme immonuassy system | Yoo SW *et al*., 2011; Asimakopoulos B *et al*., 2006; Asimakopoulos B *et al*., 2005; Nikolettos N *et al*., 2004; Yoshino O *et al*., 2003; Lédée-Bataille N *et al*., 2001; Lee KS *et al*., 2000; Chen CD *et al*., 2000 | TNFα levels in follicles of non-pregnant women were higher than in pregnant (Asimakopoulos *et al*., 2005). |
| **583** | Tumor necrosis factor-inducible gene 6 protein | NP\_009046.2 | P98066 | 26051243 | TNFAIP6  TSG-6 | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 | Involved in coupling reaction between hyaluronan and ITI (Inter-alpha-trypsin inhibitor) that is necessary for normal expansion of the cumulus-oocyte complex (Jessen *et al*., 2003). |
| **584** | Tumor necrosis factor ligand superfamily member 6 | NP\_000630.1 | **P48023** | 4557329 | FASLG  FasL (TNFSF6) | ELISA | Onaln G *et al*., 2006 |  |
| **585** | Tumor necrosis factor receptor superfamily member 6 | NP\_000034.1 | **P25445** | 4507583 | FAS  FasR (CD95) | ELISA; Chemiluminescent enzyme labeled immunometric assay | Onaln G *et al*., 2006; Malamitsi-Puchner A *et al*., 2003 |  |
| **586** | Vacuolar protein sorting-associated protein 4A | NP\_037377.1 | **Q9UN37** | 7019569 | VPS4A  Vps4-A | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **587** | Vang-like protein 1 | NP\_001165882.1 | **Q8TAA9** | 289547194 | VANGL1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **588** | Vascular cell adhesion protein 1 | NP\_542413.1 | **P19320.2**  **(P19320)** | 18201909 | VCAM1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; ELISA | Ambekar AS *et al*., 2013; **Benifla JL *et al*., 2001** |  |
| **589** | Vascular endothelial growth factor A | NP\_001020537.2 | P15692 | 76781480 | VEGFA  VEGF-A | ELISA; EIA; Multiplex sandwich immunoassay; Chemiluminescent enzyme labeled immunometric assay; Quantitative enzyme immunoassay | Gao MZ *at al*., 2012; Kaya A *et al*., 2012; Lédée N *et al*., 2011; Humaidan P *et al*., 2011; Nishigaki A *et al*., 2011A; Cerrillo M *et al*., 2009; Gutman G *et al*., 2008; Monteleone P *et al*., 2008; Ferrari B *et al*., 2006; Asimakopoulos B *et al*., 2006; Cunha-Filho JS *et al*., 2005A; Asimakopoulos B *et al*., 2005; Nikolettos N *et al*., 2004; Balasch J *et al*., 2004; Attar E *et al*., 2003; Kawano Y *et al*., 2003; Dorn C *et al*., 2003; Abbas MM *et al*., 2003; Malamitsi-Puchner A *et al*., 2003; Tokuyama O *et al*., 2002; Agrawal R *et al*., 2002; Wang TH *et al*., 2002; Neulen J *et al*., 2001; Quintana R *et al*., 2001; Benifla JL *et al*., 2001; Malamitsi-Puchner A *et al*., 2001; Klein NA *et al*., 2000; Chen CD *et al*., 2000; Manau D *et al*., 2000 | Produced by TCs and GCs and positively correlated with follicle dimensions and oocyte maturation (Predominantly VEGF121 and VEGF165) (Nishigaki *et al*., 2011A);  It is secreted from corpus luteum and may play an important role inducing endothelial permeability of OHSS (Chen *et al*., 2010);  VEGF concentrations are higher in FF than in serum (two days after OR) of patients underwent ovarian hyperstimulation for IVF programs (Gao *et al*., 2011) (Balasch *et al*., 2004);  VEGF levels in FF appear to be age-dependent and were supposed to be biomarker of oocyte maturation (Kawano *et al*., 2003);  Down regulated in women with endometriosis, may be associated with reduced embryo quality and implantation rates (Pellicer *et al*., 2000);  It is modulated by LH in ovarian follicle angiogenesis (Gutman *et al*., 2008);  Its concentration is higher in FF of women of advanced reproductive age compared with that of younger women (Kawano *et al*., 2003);  May play an important role in follicular growth and development (Kawano *et al*., 2003);  Might be negatively correlated with the number of follicles (Tokuyama *et al*., 2002);  Secreted by luteinized cells and GCs into HFF (Balasch *et al*., 2004). |
| **590** | Vascular endothelial growth factor receptor 1  (Soluble VEGF receptor-1 (sFlt-1); Savchev SI *et al*., 2010) | NP\_002010.2 | **P17948** | 156104876 | FLT1  VEGFR-1 | ELISA | Gruemmer R *et al*., 2005; Neulen J *et al*., 2001 | May modulate VEGF activity (Gruemmer *et al*., 2005);  Produced by ECs, acts as negative modulator for bioavailability of VEGF (Gruemmer *et al*., 2005). |
| **591** | Vasopressin-neurophysin 2-copeptin | NP\_000481.2 | P01185 | 13259533 | AVP  AVP-NPII | Nano-LC MALDI ToF/ToF MS | Hanrieder J *et al*., 2008 |  |
| **592** | Vasorin | NP\_612449.2 | Q6EMK4 | 88702793 | VASN  Vasorin | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **593** | Versican core protein | NP\_001157569.1 | P13611.4  (P13611) | 255VCAN  918077 | VCAN  Versican | 2DE/LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **594** | Vimentin | NP\_003371.2 | P08670 | 62414289 | VIM  Vimentin | 2DE/MALDI ToF MS | Bianchi L *et al*., 2013 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013). |
| **595** | Vitamin D-binding protein | NP\_000574.2 | P02774 | 32483410 | GC  VDB | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; CE-MALDI ToF/ToF MS | Ambekar AS *et al*., 2013; Hanrieder J *et al*., 2009 |  |
| **596** | Vitamin K-dependent protein C | NP\_000303.1 | P04070 | 4506115 | PROC  Protein C | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **597** | Vitamin K-dependent protein S | NP\_000304.2 | P07225 | 192447438 | PROS1  Protein S | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **598** | Vitamin K-dependent protein Z | NP\_003882.1 | P22891 | 4506121 | PROZ  Protein Z | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **599** | Vitronectin | NP\_000629.3 | P04004 | 88853069 | VTN  Vitronectin | 2DE/MALDI ToF MS; Nano-LC-MS/MS; 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; LC-MS/MS; SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013; Lo Turco EG *et al*., 2013; Bianchi L *et al*., 2013; Kushnir MM *et al.*, 2012; Twigt J *et al*., 2012; Yoo SW *et al*., 2011; Hanrieder J *et al*.,2008 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013);  Correlated to IVF outcome (Kushnir *et al*., 2012);  Upregulated in endometriosis patients (Lo Turco *et al*., 2013);  Found in non pregnancy patients with endometriosis (Lo Turco *et al*., 2013). |
| **600** | von Willebrand factor | NP\_000543.2 | P04275 | 89191868 | VWF  von Willebrand factor | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/LC-MS/MS | Ambekar AS *et al*., 2013; Twigt J *et al*., 2012 |  |
| **601** | V-set and transmembrane domain-containing protein 2B | NP\_001139811.1 | **A6NLU5** | 226437599 | VSTM2B  Vstm2b | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **602** | Xaa-Pro dipeptidase | NP\_001159529.1 | **P12955.3**  **(P12955)** | 260593665 | PEPD  Prolidase | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **603** | Xin actin-binding repeat-containing protein 2 | NP\_001186073.1 | **A4UGR9.3**  **(A4UGR9)** | 312433986 | XIRP2  CMYA3 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **604** | Xylosyltransferase | NP\_071449.1 | Q86Y38 | 28269693 | XYLT1 | Activity assay | Götting C *et al*., 2002 | Its activity is higher in FF from women undergoing IVF than in serum and it may play a role in maintaining the haemostatic potential of the FF (Götting *et al*., 2002). |
| **605** | Zinc-alpha-2-glycoprotein | NP\_001176.1 | P25311 | 4502337 | AZGP1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; 2DE/MALDI ToF MS; 2DE/LC-MS/MS; Nano-LC MALDI ToF/ToF MS; CE-MALDI ToF/ToF MS | Ambekar AS *et al*., 2013; Bianchi L *et al*., 2013; Twigt J *et al*., 2012; Hanrieder J *et al*., 2009; Hanrieder J *et al*.,2008 | Supposed focal role in follicle development and maturation (Bianchi *et al*., 2013). |
| **606** | Zinc finger protein Gfi-1 | NP\_005254.2 | **Q99684** | 71037377 | GFI1 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **607** | Zinc finger protein 80 | NP\_009067.2 | **P51504** | 89111947 | ZNF80 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **608** | Zinc finger protein 184 | NP\_009080.2 | **Q99676** | 222831664 | ZNF184 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **609** | Zinc finger protein 300 | NP\_001166303.1 | **Q96RE9.3**  **(Q96RE9)** | 290542339 | ZNF300 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **610** | 14-3-3 protein epsilon  (Tyrosine 3-monoxygenase/tryptophan 5-monooxygenase activation protein, epsilon polypeptide) | NP\_006752.1 | **P62258** | 5803225 | YWHAE  14-3-3 epsilon | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **611** | 14-3-3 protein gamma  (Tyrosine 3-monoxygenase/tryptophan 5-monooxygenase activation protein, gamma polypeptide) | NP\_036611.2 | **P61981** | 21464101 | YWHAG  14-3-3 gamma | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **612** | 14-3-3 protein theta | NP\_006817.1 | P27348 | 5803227 | YWHAQ  14-3-3  tetha | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |
| **613** | 14-3-3 protein zeta/delta  (Tyrosine 3-monoxygenase/tryptophan 5-Monooxygenase activation protein, zeta polypeptide) | NP\_003397.1 | **P63104** | 4507953 | YWHAZ  14-3-3  Zeta/delta | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS | Ambekar AS *et al*., 2013 |  |
| **614** | 28S ribosomal protein S9, mitochondrial | NP\_872578.1 | P82933 | 33188463 | MRPS9 | Nano-LC-MS/MS | Kushnir MM *et al.*, 2012 |  |
| **615** | 39S ribosomal protein L18, mitochondrial  (mitochondrial ribosomal protein L18) | NP\_054880.2 | Q9H0U6 | 21265080 | MRPL18 | Nano-LC-MS/MS | Kushnir MM *et al.*, 2012 |  |
| **616** | 72 kDa type IV collagenase | NP\_004521.1 | **P08253** | 11342666 | MMP2  MMP-2 | SDS-PAGE/OFFGEL fractionation/SCX/LC-MS/MS; ELISA; Gel electrophoresis/Zymography/Western Blot | Ambekar AS *et al*., 2013; Horka P *et al*., 2012; Baka S *et al*., 2009; Lahav-Baratz S *et al*., 2003 | Involved in follicular development (D’Ascenzo *et al*., 2004). |
| **617** | 78 kDa glucose-regulated protein | NP\_005338.1 | P11021 | 16507237 | HSPA5  GRP78 | 2DE/LC-MS/MS | Twigt J *et al*., 2012 |  |

**\*** In case there is not perfect correspondence (according to the Blast alignment tool: 100% identity, 100% similarity, and no gap) between the protein sequence indicated by Authors, whose identity refers to a GenBank or NCBI entry, and a UniProtKB entry protein, we reported in Table I the UniProtKB entry whose sequence alignment, performed by Blast, to the protein in reference article gave the best result (*i.e.* values of % identity and % similarity, and gap number and extension).

**¥** MetaCore used gene name synonyms (applied in the net to name nodes) are reported in table along with the conventionally accepted ones (highlighted in yellow).

Legend:

GCs: granulosa cells

HFF: human follicular fluid

HP: human plasma

ICSI: intracytoplasmic sperm injection

IVF: in vitro fertilization

OHSS: ovarian hyperstimulation syndrome

PCOS: polycystic ovary syndrome

TCs: theca cells