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**Supplemental Table 1. List of primers**

|  |  |
| --- | --- |
| Gene (Enzemble No.Transcript ID) | **Sequence** |
|
| ASNS (ENSRNOT00000010079) | Genomic DNA | Forward -83F | GCG TCC TTC GTC AGC ATT G |
| Reverse -7R | CGT GCG GGA AGT TTC ATC |
| mRNA | Forward +11091F | TGG ACT CCA GCT TGG TTG |
| Reverse +11157R | AGA GCA TAG GGC ACT TGG |
| ATF3 (ENSRNOT00000005085) | Genomic DNA | Forward -125F | GGC CAG TTC TCC CTG GAA GCT AT |
| Reverse -56R | CCC GCT TAA CTC CTG GTT ACC AAT |
| mRNA | Forward +688F | AGA AGG AAC ATT GCA GAG CTA AGC |
| Reverse +767R | TGG GGT GGA AAA GGA GGA TTC |
| CHOP (ENSRNOG00000006789) | Genomic DNA | Forward -99F | CGT GCC GCT TTC TGA TTG |
| Reverse -36R | ATG CTA TTC GGT CCC TCC |
| mRNA | Forward +636F | CTC TGA TCG ACC GCA TGG TCA G |
| Reverse +731R | TGG CGT GAT GGT GCT GGG |
| L7a (ENSRNOT00000006754) | mRNA | Forward +64F | GAG GCC AAA AAG GTG GTC AAT CC |
| Reverse +127R | CCT GCC CAA TGC CGA AGT TCT |
| Actb (ENSRNOT00000042459) | mRNA | Forward +451F | GAG ACC TTC AAC ACC CCA GC |
| Reverse +526R | CAG TGG TAC GAC CAG AGG CA |
| Tbp (ENSRNOT00000014605)  | mRNA | Forward +600F | CAG GCA CCA CCC CCT TGT ATC CTT C |
| Reverse +679R | AGA GCT CTC AGA GGC TGG TGT GGC A |
| Map1lc3a (ENSRNOT00000035060) | Genomic DNA | Forward -125F | CTG GCT TCA CAG TCC TGA GG |
| Reverse -56R | TAA GGG GGC GGA GCT ACA |
| mRNA | Forward +688F | AGA AGG AAC ATT GCA GAG CTA AGC |
| Reverse +767R | TGG GGT GGA AAA GGA GGA TTC |
| Map1lc3b (ENSRNOT00000051352) | Genomic DNA | Forward -244F | AGC CAG GAG CAG AAG ATG AA |
| Reverse -156R | TGA GTC GGC TTC CCA AAA |
| mRNA | Forward +626F | GTG TTG TGG AAG AAT GCC |
| 　 | Reverse +726R | TCA CCC TTG TAT CGC TCT |
| Bnip3 (ENSRNOT00000023477) | Genomic DNA |  Forward -488F | ATG CTT CTG TCA CTG GCG |
| reverse -394R | CTG GGG TTG GGT ATG GAT |
| mRNA | Forward +652F | AAG GCG TCT GAC AAC TTC CA |
| Reverse +739R | TCA CAG CTC AGC GTG AAT |
| Atg4b (ENSRNOT00000025529) | Genomic DNA | Forward -175F | TGG TGA GAC CTG AGT TGC TG |
| Reverse -89R | CTG CTC ATC GGG GAA TGA |
| mRNA | Forward +24F | GAG TGT TCT CAC TTT CCG |
| Reverse +113R | ATC ACC ACA GTG TTG TCC |

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**Supplemental Table 2. List of antibodies**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Cat. Number | Lot No. | Company name |
| Name | Modification |
| Actin(I-19)-R |  | sc-1616-R | C0907 | Santa Cruz Biotechnology, Inc, Santa Cruz, CA |
| CREB-2(C-20) |  | sc-200 | H2008 | Santa Cruz Biotechnology, Inc, Santa Cruz, CA |
| Normal rabbit IgG |  | sc-2027 | F1608 | Santa Cruz Biotechnology, Inc, Santa Cruz, CA  |
| p-eIF2alpha | p-S51 | 9721L | Lot 7 | Cell Signaling Technology, Inc, Danvers, MA |
| Total eIF2alpha |  | 9722 | Lot 11 | Cell Signaling Technology, Inc, Danvers, MA |
| LC3B |  | Ab48394 | Lot 4 | Abcam, Cambridge, MA |
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**Supplemental Table 3 Selected plasma amino acids in rat dams at sacrifice that were not changed**

|  |  |  |
| --- | --- | --- |
| Amino Acids (μmol/L) | Control (20 kcal% protein) | LP (8 kcal% protein) |
| Leu | 202 ± 8 | 199 ± 38 |
| Ile | 138 ±16 | 144 ± 21 |
| Val | 269 ± 20 | 260 ± 30 |
| Met | 81 ± 3 | 73 ± 5 |
| Glu | 133 ± 9 | 134 ± 14 |
| Asp | 73 ± 7 | 51 ± 9 |
| Pro | 343 ± 16 | 317 ± 34 |
| Tyr | 99 ± 8 | 99 ± 15 |
| Arg | 617± 49 | 559 ± 40 |
| Gly | 489 ± 48 | 622 ± 18 |