

Evaluation of xanthosine treatment on gene expression of mammary glands in early lactating goat

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Supplementary file S1: *List of genes, their custom designed primers, product length and annealing temperature for RT-qPCR*

	Gene name	Primer (5'-3')	Product length	Tm
<i>Stem cell markers</i>				
1	ALDH1	F: CTGGGCTGACAAGATCCAGG R: GACAACCACTGTGTTTCCGC	172	64
2	HNF4A	F: GGCAGGAAGGGTATTGGGATGGGA R: GTGGCTGAGGGAGGCTGGGT	150	60
3	NR5A2	F: TGGTGCTCTTTAGTTTAGATGTCA R: TTCTCCGTCTGCTGTGGGTA	124	60
4	FNDC3B	F: ACCACCTACAAGACCCCTCA R: ACTTCCCCTGACTCGCTTC	150	60
5	NOTCH1	F: CCCGGAGTGGACAGGTCAGT R: TTTTCGCTACAGTCCGCGCC	153	60
<i>Milk synthesis related genes</i>				
6	VIM	F: GAGAGAGGAAGCCGAGAGCAC R: CCAGGTCAAGACGTGCCAAA	131	60
7	CSN2	F: CAGCAGCAAACAGAGGATGAAC R: TTTGTGGGAGGCTGTTAGGG	106	60
8	CSN1S2	F: AACATGCTGGTTGTATGAAGTAAAGTG	76	60

		R: CTGGTTATGGTTGGACTGGAAAA		
9	LALBA	F: CCTGAATGGGTCTGTACCGC	136	60
		R: AGTGAGGGTTCTGGTCGTCT		
10	MUC1	F: ATTGCCCTGGTTGTGTGTCA	111	60
		R: ATGGGTGTGGTAGGTGGAGT		
11	BLG	F: GAGAGTGGTCACATACCGGG	136	60
		R: TCATATTGACTGCCGGCTCC		
12	FABP3	F: CGGCAGATGACAGGAAGGTC	114	60
		R: TCCCGTCAACTATTTCCCGC		
13	CD36	F: TCCCTGCAAAACACAGACCC	170	60
		R: ATAGTGCCTTGCTGATGCTGT		
<i>Steroid receptors and cell proliferation markers</i>				
14	ESR1 (ER α)	F: TTGCTGGCTACTTCGTCTC	148	56
		R: GGTGGATGTGGTCCTTCTC		
15	PRB	F: CAGTGGTCAAGTGGTCTAAATC	116	56
		R: TCTCCATCCTAGTCCAAATACC		
16	MKI67	F: CCACTTGCCACCGTCCCTTT	166	60
		R: TGTTTCAGCAGCTATTTTGGCAAC		
17	TPT1 (p21)	F: GGTGCTCTGCTGGACTACCG	148	60
		R: TGGATGAAAAGCAGTAGCCAGTTAT		
<i>Endogenous reference genes</i>				
18	RPL4	F: TTGGAAACATGTGTCGTGGG	101	60
		R: GCAGATGGCGTATCGCTTCT		
19	RPS23	F: CCCAATGATGGTTGCTTGAA	101	60
		R: CGGACTCCAGGAATGTCACC		

Supplementary file S2: *List of primary antibodies used for immunolabelling of goat mammary epithelial cells.*

Name of Antibody	Gene name	Functions and localization	Vendor	Dilution
ALDH1A1	Aldehyde dehydrogenase 1 member A1	Marker of mammary stem/progenitor cells and mammary cancer cells, localized in nucleus and cytoplams	Biorybt, UK	1:200
MME (CD10)	Membrane metallo-endopeptidase	Marker of myoepithelial cells, cytoplasmic localization	Biogenex, USA	Ready to use
CSN2	Casein beta	Role in determination of the surface properties of the casein micelles	Biorybt, UK	1:500
MUC1	Mucin 1	Marker of cell differentiation, localizes in apical border of luminal mammary epithelial cells, Aberrant nuclear localization in mammary cancer	Biogenex, USA	Ready to use
KRT14	Keratin 14	Marker of basal mammary epithelial cells, localized in cytoplasm	Biogenex, USA	Ready to use
EMA, clone E29	Epithelial membrane antigen	Similar to MUC1	Biogenex, USA	Ready to use