

Supplementary Table.

Table S1. Primers for quantitative real-time PCR.

Gene Name ¹	Sequences (5'-3') ²	GenBank accession	Amplification size	Efficiency ³ (%)
<i>Inflammation</i>				
IL-1 β	F: CATGTGTGCTGAAGGCTCTC R: AGTGTCGGCGTATCACCTTT	XM_013967700.2	172	93.50
IL-6	F: ACACTGACATGCTGGAGAAGATGC R: CCGAATAGCTCTCAGGCTGAACTG	NM_001285640.1	116	91.26
IL-10	F: AAACAAGAGCAAGGCGGTGGAG R: ACTCACTCATGGCTTTGTAGACACC	XM_005690416.3	83	95.82
TNF- α	F: CAAGTAACAAGCCGGTAGCC R: AGATGAGGTAAAGCCCGTCA	XM_005696606.3	153	101.30
MAPK14	F: ACAGATGACCACGTTTCAGTTCCTTATC R: TCTTCAGCTCACAGTCTTCATTCACAG	XM_018038791	130	103.55
<i>Thiamine transport</i>				
SLC19A2	F: GAGGAACAGGAATCCAAGCCAGAC R: GAGCAGAGGGCGAGAGGAGTAG	XM_018060285.1	90	96.22
SLC19A3	F: TGGACCTACTCTTACCTGGCACTAC R: CTGGAGGATGATGACTGGCTTG TAG	XM_005676643.3	84	97.88
SLC25A19	F: CAGCTCCTTGAAGCGTGCCTAC R: TCCAGTGGGTATGTGAGGGTCTTG	XM_013972239.2	126	92.15
<i>Proliferation</i>				
CCND1	F: TCTCCTATCACCGCCTGACA R: TTGGGGTCCAAGTTCTGCTG	XM_018043271.1	139	102.63
CCNA2	F: TCCTTGAAGCTGACCCGTTC R: TCCCTGATTGCTTGCTGAGG	XM_018056659.1	226	95.13

CDK2	F: AAGTGGCTGCATCACAAGGA R: CTGGCCAAACCACCTCATCT	XM_013963900.1	150	90.86
CDK6	F: GACCAGCAGTATGAGTGCGT R: TCTGCACTCTCACACGCTTC	XM_018047425.1	118	98.50
<i>Energy metabolism</i>				
AMPK α 1	F: GAGATCAGGCTCAGTTAGCAACTATCG R: CAGGAGAAGAGTCAAGTGAGGTTAAG	XM_018065500.1	122	90.54
AMPK α 2	F: TGGTGGAGCAGAGGTCTGGTTC R: GGTCAAGGAGCCCGTGAGAGAG	XM_018044652.1	137	97.70
SIRT1	F: TCTTGCGGCAGTAACAGTGATAGTG R: ACATCAGCATCATCTTCCAAACCATTG	XM_018042148.1	116	92.77
PGC1 α	F: GGCAGATACACTCTTCCACAGATTCC R: CGGCTCGGATTTCTGGTCTTG	NM_001285631.1	120	93.62
<i>Respiratory chain</i>				
Complex I	F: GAGCGGATTACACCACAGACAG R: TCAGAAGACAGCCAGCGGTAGG	XM_005680980.3	137	95.45
Complex II	F: CCAGGGAGGACTTCAAGGAGAGG R: AGTGCTGCTCAAACGGCTTCTTC	XM_018065656.1	87	103.20
Complex III	F: GGCTCTAGCTGCTGGTTCATACAC R: TCCACTTGCTGCCATTGACTTCC	XM_005697593.3	130	92.85
Complex IV	F: CTTTGCCTCTGAAGTCCTTGAGTCG R: CCGAGTGGAGCCAGGAGTTGAG	XM_005697738.3	150	94.30
Complex V	F: GACTGCCTCCCATCCTAAATGCC R: CAAGCCTTCTGTACCGTCCATAGC	XM_005680331.2	125	105.48
<i>Reference genes</i>				
β -actin	F: GAATCCTGCGGCATTCACG R: GGGCGCGATGATCTTGA	NM_001314342.1	189	95.90
GAPDH	F: GGGTCATCATCTCTGCACCT	XM_005680968.3	176	101.76

	R: GGTCATAAGTCCCTCCACGA			
HPRT1	F: CACCAGCTGGCTCCGTTATG	XM_018044253.1	163	95.04
	R: AGTCGTTCCGGTCCTGTCCAT			

¹*IL-1β* = interleukin-1β; *TNF-α* = tumor necrosis factor alpha; *MAPK14* = mitogen-activated protein kinase 14 (p38); *SLC25A2* = solute carrier family 19, member 2 (THTR1); *SLC19A3* = solute carrier family 19, member 3 (THTR2); *SLC25A19* = mitochondrial thiamine pyrophosphate transporter (MTPPT); *CCND1* = cyclin D1; *CCNA2* = cyclin A2; *CDK2* = cyclin dependent kinase 2; *AMPKα1* = protein kinase AMP-activated catalytic subunit alpha 1; *SIRT1* = sirtuin 1; *PGC1α* = PPARG coactivator 1 alpha; *GAPDH* = glyceraldehyde-3-phosphate dehydrogenase; *HPRT1* = hypoxanthine phosphoribosyltransferase 1.

²F = forward; R = reverse.

³Efficiency = $-1 + 10^{(-1/\text{slope})} \times 100$.

Supplementary Figure.

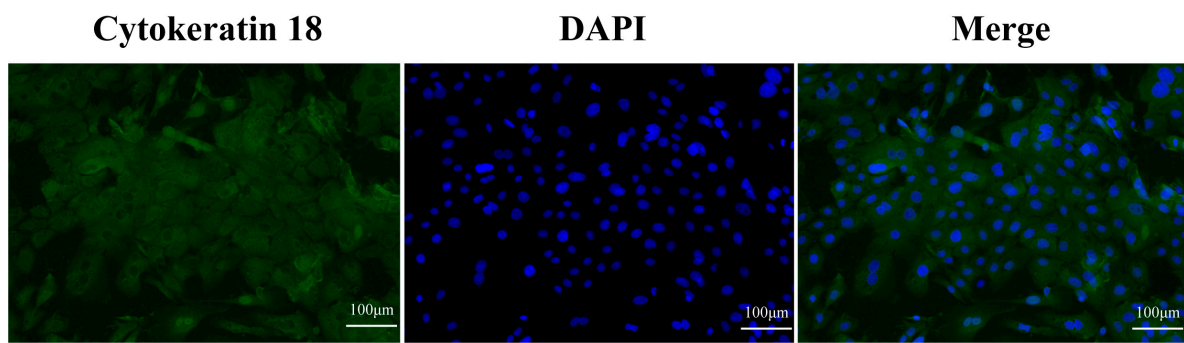


Figure S1. Immunofluorescence identification of cytokeratin 18 in isolated goat ruminal epithelial cells. The primary antibody was Cytokeratin 18 (Santa Cruz, sc-32329). Green fluorescence denotes stained proteins and blue denotes the cell nucleus stained with DAPI solution