**Table S1:** Forward and reverse primers for reverse transcription quantitative PCR for heifers receiving diets differing in starch and fiber sources.

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| --- | --- | --- | --- | --- |
| Gene Symbol | Gene Name | GenBank Accession No. | Primer Type | Primer (5' to 3') |
| MCT1 (SLC16A1) | Monocarboxylate Transporter 1 | NM\_001037319 | FORWARD | GTCATTGGAGGTCTTGGGCT |
|  |  |  | REVERSE | GGTAGAGAGGAACACAGGGC |
| MCT2 (SLC16A7) | Monocarboxylate Transporter 2 | NM\_001076336.2 | FORWARD | TGGTCTCGGCCTCTTACAGT |
|  |  |  | REVERSE | GCCATTCGCTACAGGTCGTT |
| MCT4 (SLC16A3) | Monocarboxylate Transporter 4 | NM\_001109980.3 | FORWARD | GTGACACAGCCTGGATCTCC |
|  |  |  | REVERSE | AGAAGGACGCAGACACCATG |
| NHE1 (SLC9A1) | Sodium Hydrogen Exchanger Isoform 1 | NM\_174833.2 | FORWARD | GTCCCACACGACCATCAAGT |
|  |  |  | REVERSE | AGGGTGCTGATGACAAACGT |
| NHE2 (SLC9A2) | Sodium Hydrogen Exchanger Isoform 2 | XM\_002691185.6 | FORWARD | CGAGCAGCTCTACATCCTGG |
|  |  |  | REVERSE | ATGCCAGCAAACACGTCAAC |
| NHE3 (SLC9A3) | Sodium Hydrogen Exchanger Isoform 3 | NM\_001192154.2 | FORWARD | CCTCATGAGAAGGTCGGCTC |
|  |  |  | REVERSE | GAACGGATGAAAGCCAGGGA |
| AACS | Acetoacetyl-CoA Synthetase | NM\_001163929.1 | FORWARD | ACCTGCGTGTGTGCCATTAC |
|  |  |  | REVERSE | TTAAGGCTGCAAGCTGGTTGA |
| HMGCL | 3-Hydroxy-3-Methylglutaryl-CoA Lyase | NM\_001075132.1 | FORWARD | ATTGTGGAAGTTGGTCCTCGA |
|  |  |  | REVERSE | GGACCCAGTGGCTCACAGTT |
| HMGCS2 | 3-Hydroxy-3-Methylglutaryl-CoA Synthase 2 | NM\_001045883.1 | FORWARD | TTACGGGCCCTGGACAAAT |
|  |  |  | REVERSE | GCACATCATCGAGAGTGAAAGG |
| BDH1 | 3-Hydroxybutyrate Dehydrogenase 1 | NM\_001034600.2 | FORWARD | CCCACCACCAGTCTGAGCAT |
|  |  |  | REVERSE | CCCACTACTCTGCACCCCAA |
| AKT1 | AKT Serine/Threonine Kinase 1 | NM\_173986.2 | FORWARD | CTGCACAAGCGAGGTGAGTA |
|  |  |  | REVERSE | GAAGTTGTTGAGGGGCGACT |
| GJA1 | Gap Junction Protein Alpha 1 | NM\_174068.2 | FORWARD | ATGAGCAGTCTGCCTTTCGT |
|  |  |  | REVERSE | AGCCAGGTACAGGAGTGTGG |
| CLDN1 | Claudin 1 | NM\_001001854.2 | FORWARD | CAGTGCAAAGTCTTCGACTCC |
|  |  |  | REVERSE | GTCGTCTTCCATGCACTTCA |
| RPS15 (reference)1 | Ribosomal Protein S15 | NM\_001024541.2 | FORWARD | CAAGGCCAAGAAAGATGCGC |
|  |  |  | REVERSE | TCAGGCTTGATTTCCACCTGG |

RPS15 (reference)1: RPS15 was compared to RPS9 and RPS26 prior to the full analysis to choose the best reference gene.