**Supplemental Table S1** A list of genes or gene transcripts that were differentially expressed among pigs fed three different diets

| Transcript ID[a] | Gene Symbol | Gene Description[b] | GenBank[c] | *P* -value[d] |
|---|---|---|---|---|
| 15263546 | ALKBH7 | AlkB, alkylation repair homolog 7 | XM_003123112 | 0.002 |
| 15184804 | AMD1 | Adenosylmethionine decarboxylase 1 | XM_003121345 | 0.001 |
| 15314841 | ATP6V1G2 | Atpase, H+ transporting, lysosomal 13 kda, V1 subunit G2 | NM_001145380 | 0.003 |
| 15314665 | C7H6orf136 | Chromosome 6 open reading frame 136 | NM_001243459 | 0.009 |
| 15229626 | CCDC25 | Coiled-coil domain containing 25 | NM_001243572 | 0.006 |
| 15184906 | CD164 | CD164 molecule | XM_001924626 | 0.005 |
| 15296214 | CFAP20 | Cilia and flagella associated protein 20 | NM_001244786 | 0.002 |
| 15255767 | CFD | Complement factor D (adipsin) | XM_003122985 | 0.003 |
| 15332101 | CHIT1 | Chitinase 1 (chitotriosidase) | XM_003130296 | 0.010 |
| 15329843 | CHORDC1 | Cysteine and histidine-rich domain (CHORD) containing 1 | NM_001113446 | 0.001 |
| 15259346 | CHSY3 | Chondroitin sulfate synthase 3 | XM_003123906 | 0.002 |
| 15220865 | CIDEC | Cell death-inducing DFFA-like effector c | NM_001112689 | 0.006 |
| 15286963 | CLCA2 | Chloride channel accessory 2 | XM_003125930 | 0.010 |
| 15202461 | CNTFR | Ciliary neurotrophic factor receptor | XM_003130672 | 0.008 |
| 15209728 | CNTROB | Centrobin, centrosomal BRCA2 interacting protein | XM_003358269 | 0.006 |
| 15319886 | CPEB2 | Cytoplasmic polyadenylation element binding protein 2 | NM_001185049 | 0.001 |
| 15248533 | CST9L | Cystatin-9 like | XM_003134304 | 0.008 |
| 15215166 | CXCR6 | Chemokine (C-X-C motif) receptor 6 | NM_001001623 | 0.001 |
| 15255294 | DBX1 | Developing brain homeobox 1 | XM_003122916 | 0.004 |
| 15202526 | DNAJA1 | Dnaj (Hsp40) homolog, subfamily A, member 1 | NM_001244163 | 0.000 |
| 15267072 | DND1 | DND microrna-mediated repression inhibitor 1 | XM_003124043 | 0.004 |
| 15246704 | EIF2 | Eukaryotic translation initiation factor 2 | XM_005672861 | 0.002 |
| 15249075 | EIF2 | Eukaryotic translation initiation factor 2 | XM_005672861 | 0.002 |
| 15276460 | ERLEC1 | Endoplasmic reticulum lectin 1 | XM_003125147 | 0.009 |
| 15288283 | ESYT1 | Extended synaptotagmin-like protein 1 | XM_003126262 | 0.006 |
| 15297540 | FUT1 | Fucosyltransferase 1 | NM_214068 | 0.004 |
| 15194689 | GABPB1 | GA binding protein transcription factor, beta subunit 1 | XM_005659610 | 0.005 |
| 15288427 | GPR182 | G protein-coupled receptor 182 | XM_003126290 | 0.001 |
| 15216623 | H1FOO | Oocyte-specific H1 histone | NM_001205063 | 0.007 |
| 15251282 | HOXA11B | Homeobox A11 | AF453292 | 0.001 |
| 15251306 | HOXA4 | Homeobox A4 | XM_003134841 | 0.003 |
| 15313557 | HSP90AA1 | Heat shock protein 90kda alpha (cytosolic), class A member 1 | NM_213973 | 0.009 |
| 15310151 | HSP90AB1 | Heat shock protein 90kda alpha (cytosolic), class B member 1 | NM_001244433 | 0.005 |

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|---|---|---|---|---|
| 15204824 | HSPH1 | Heat shock 105kda/110kda protein 1 | NM_001097504 | 0.008 |
| 15276892 | LCLAT1 | Lysocardiolipin acyltransferase 1 | NM_001142845 | 0.003 |
| 15302843 | LGALS13 | Lectin, galactoside-binding, soluble, 13 | NM_001142841 | 0.005 |
| 15253268 | LOC100625033 | Uncharacterized | XM_003360198 | 0.009 |
| 15185014 | ME1 | Malic enzyme 1, $NADP^+$-dependent, cytosolic | XM_001924333 | 0.005 |
| 15245225 | MFAP3 | Microfibrillar-associated protein 3 | XM_003134126 | 0.003 |
| 15263058 | MIR3187 | Microrna 3187 | NR_036154 | 0.006 |
| 15337580 | MORF4L2 | Mortality factor 4 like 2 | XM_003135267 | 0.010 |
| 15292502 | MYL6 | Myosin, light chain 6 | NM_001163997 | 0.007 |
| 15194051 | MYO5B | Myosin VB | XM_003121434 | 0.001 |
| 15198805 | PDCL | Phosducin-like | XM_001927696 | 0.003 |
| 15286002 | PHGDH | Phosphoglycerate dehydrogenase | NM_001123162 | 0.000 |
| 15268536 | PSPH | Phosphoserine phosphatase | NM_001243221 | 0.006 |
| 15260400 | RASSF7 | Ras association domain family member 7 | XM_003122393 | 0.004 |
| 15235102 | RND3 | Rho family gtpase 3 | NM_214296 | 0.007 |
| 15228053 | SCD | Stearoyl-coa desaturase (delta-9-desaturase) | NM_213781 | 0.007 |
| 15221605 | SERP1 | Stress-associated endoplasmic reticulum protein 1 | NM_001243260 | 0.003 |
| 15270271 | SLC9A2 | Solute carrier family 9, subfamily A (NHE2, cation proton antiporter 2), member 2 | NM_001100189 | 0.005 |
| 15259768 | TMCO6 | Transmembrane and coiled-coil domains 6 | XM_003124040 | 0.004 |
| 15194165 | TXNL1 | Thioredoxin-like 1 | NM_001244276 | 0.007 |
| 15218159 | UBE2B | Ubiquitin-conjugating enzyme E2B | NM_001257356 | 0.010 |
| 15321630 | UBE2D3 | Ubiquitin-conjugating enzyme E2D 3 | NM_001078673 | 0.006 |
| 15227915 | UBTD1 | Ubiquitin domain containing 1 | XM_003359315 | 0.007 |
| 15284156 | XKR4 | XK, Kell blood group complex subunit-related family, member 4 | XM_003355057 | 0.006 |
| 15221539 | ZIC1 | Zic family member 1 | XM_003358599 | 0.005 |
| 15225194 | ZMAT5 | Zinc finger, matrin-type 5 | XM_001929010 | 0.004 |
| 15302378 | ZNF181 | Zinc finger protein 181 | NM_001244818 | 0.001 |
| 15344815 | | --- | --- | 0.000 |
| 15345937 | | --- | --- | 0.000 |
| 15349723 | | --- | --- | 0.000 |
| 15347387 | | --- | --- | 0.001 |
| 15182061 | | --- | --- | 0.001 |
| 15258761 | | --- | --- | 0.001 |
| 15233088 | | --- | --- | 0.001 |
| 15240879 | | --- | --- | 0.002 |
| 15332195 | | --- | --- | 0.002 |

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|---|---|---|---|
| 15276173 | --- | --- | 0.002 |
| 15180499 | --- | --- | 0.002 |
| 15232252 | --- | --- | 0.002 |
| 15195023 | --- | --- | 0.002 |
| 15272119 | --- | --- | 0.002 |
| 15342067 | --- | --- | 0.002 |
| 15346419 | --- | --- | 0.003 |
| 15351163 | --- | --- | 0.003 |
| 15209896 | --- | --- | 0.003 |
| 15181739 | --- | --- | 0.003 |
| 15344923 | --- | --- | 0.003 |
| 15290393 | --- | --- | 0.003 |
| 15341709 | --- | --- | 0.003 |
| 15181633 | --- | --- | 0.004 |
| 15342887 | --- | --- | 0.004 |
| 15279019 | --- | --- | 0.004 |
| 15182949 | --- | --- | 0.004 |
| 15347493 | --- | --- | 0.004 |
| 15181475 | --- | --- | 0.005 |
| 15182773 | --- | --- | 0.005 |
| 15345617 | --- | --- | 0.005 |
| 15256666 | --- | --- | 0.005 |
| 15347037 | --- | --- | 0.005 |
| 15339967 | --- | --- | 0.005 |
| 15340953 | --- | --- | 0.006 |
| 15182761 | --- | --- | 0.006 |
| 15350707 | --- | --- | 0.006 |
| 15350863 | --- | --- | 0.006 |
| 15184164 | --- | --- | 0.006 |
| 15282393 | --- | --- | 0.006 |
| 15286988 | --- | --- | 0.006 |
| 15273431 | --- | --- | 0.006 |
| 15280254 | --- | --- | 0.007 |
| 15339819 | --- | --- | 0.007 |
| 15351493 | --- | --- | 0.007 |
| 15314718 | --- | --- | 0.007 |

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|---|---|---|---|
| 15341149 | --- | --- | 0.007 |
| 15286729 | --- | --- | 0.007 |
| 15326843 | --- | --- | 0.007 |
| 15332776 | --- | --- | 0.007 |
| 15349625 | --- | --- | 0.008 |
| 15349601 | --- | --- | 0.008 |
| 15182561 | --- | --- | 0.008 |
| 15249513 | --- | --- | 0.008 |
| 15347693 | --- | --- | 0.008 |
| 15221666 | --- | --- | 0.008 |
| 15182789 | --- | --- | 0.008 |
| 15344477 | --- | --- | 0.008 |
| 15244806 | --- | --- | 0.008 |
| 15349439 | --- | --- | 0.008 |
| 15346091 | --- | --- | 0.009 |
| 15340753 | --- | --- | 0.009 |
| 15182951 | --- | --- | 0.009 |
| 15339581 | --- | --- | 0.009 |
| 15281243 | --- | --- | 0.009 |
| 15245843 | --- | --- | 0.009 |
| 15339337 | --- | --- | 0.009 |
| 15271887 | --- | --- | 0.010 |
| 15279096 | --- | --- | 0.010 |
| 15182455 | --- | --- | 0.010 |
| 15342033 | --- | --- | 0.010 |
| 15253611 | --- | --- | 0.010 |

[a] The gene transcript ID were retrived from the NetAffx calssification system (Affymetrix, Inc.).

[b] The "---" signs indicate that no annotation had been made to the corresponding DNA or RNA sequences of porcine origin.

[c] The accession numbesr for the gene sequences resided in the GenBank database (http://www.ncbi.nlm.nih.gov).

[d] *P* -value was obtained from the ANOVA test using the Partek Genomics Suite (PGS) software.