

**Supplemental Table 1. Gene expression was up-regulated in porcine placenta by dietary supplementation with 0.8% arginine between Days 14 and 25 of gestation in comparison with effects of the control diet\*.**

Gene ID	Accession No.	Gene name	p-Value	Fold change
BX918610	NM_001001863	Troponin T3 (TNNT3)	0.004	4.61
TC292911	TC292911	Unknown	0.001	4.49
CX058159	CX058159	Unknown	0.024	4.11
EW039857	NM_001742	Homo sapiens calcitonin receptor (CALCR) on chromosome 7	0.038	3.23
TC246681	XM_001788623	Bos taurus similar to endonuclease reverse transcriptase (LOC100140677) mRNA	0.024	2.87
CF362298	NM_001075988	Bos taurus transmembrane emp24 protein transport domain containing 6 (TMED6)	0.047	2.84
TC267763	TC267763	Unknown	0.049	2.60
DY425109	DY425109	Unknown	0.039	2.59
TC301630	NG_011688	Homo sapiens growth hormone receptor (GHR) on chromosome 5	0.050	2.59
AK231515	EU287432	Sus scrofa presenilin 2 (PSEN 2) mRNA complete coding sequence (cds)	0.006	2.31
PGM1	NM_001076903	Bos taurus phosphoglucomutase 1 (PGM1)	0.034	2.30
TC278497	NM_018941	Homo sapiens ceroid-lipofuscinosis neuronal 8 (epilepsy progressive with mental retardation) (CLN8)	0.010	2.23
CK462699	CK462699	Unknown	0.028	2.15
TC289044	Q98459	Unknown	0.021	2.10
TC252173	Q8P941	Unknown	0.029	2.07
TC255795	Q9TT95	Unknown	0.041	2.00
BG896072	BG896072	Unknown	0.037	1.97
TC293083	TC293083	Unknown	0.011	1.89
TC290408	P60837	Unknown	0.043	1.87
PGM1	NM_001076903	Bos taurus phosphoglucomutase 1 (PGM1)	0.030	1.86
BX923086	NM_006377	Homo sapiens unc-13 homolog B (C. elegans) (UNC13B)	0.048	1.80
TC275071	AB091391	Sus scrofa RAG-2 (recombination activating protein 2)	0.006	1.76
TC274023	NM_001097446	Sus scrofa apolipoprotein B mRNA editing enzyme catalytic polypeptide-like 3F (APOBEC3F)	0.005	1.70
BX666795	XM_001924347	Sus scrofa similar to SLCO3A1 protein (LOC100156054)	0.003	1.67
RH	NM_214378	Rhesus (RH) factor (Rh blood group)	0.019	1.66
DN106369	NM_001109960	Canis lupus familiaris glycophorin A (MNS blood group) (GYPA)	0.022	1.64
TC279102	XR_021586	Pan troglodytes leucine-rich repeat-containing G protein-coupled receptor 5 (LGR5)	0.036	1.61
TC267605	NM_001143721	Sus scrofa 6-phosphofructo-2-kinase/fructose-2,6-biphosphatase 1 (PFKFB1)	0.025	1.55
EW660666	NM_001045886	Bos taurus phenazine biosynthesis-like protein domain containing (PBLD)	0.013	1.54
TC246855	AY208121	Sus scrofa myostatin gene	0.022	1.54
TC295643	Q4TB76	Unknown	0.045	1.51
TC266252	Q4ZMW3	Unknown	0.019	1.50
AJ947838	NM_178177	Homo sapiens nicotinamide nucleotide adenylyltransferase 3 (NMNAT3)	0.022	1.50

Supplemental Table 1, Continued

Gene ID	Accession No.	Gene name	p-Value	Fold change
DN116615	Q74P05	Reverse transcriptase	0.047	1.49
BX674383	XM_001136904	Pan troglodytes hypothetical LOC465780 transcript variant 2 (LOC465780)	0.013	1.46
TC279371	XM_001496778	Equus caballus phosphoinositide-3-kinase regulatory subunit 4 (PIK3R4)	0.027	1.45
DN102244	XM_511600	Pan troglodytes mannose receptor C type 2 (MRC2)	0.034	1.43
CK466870	Q2XYG1	Unknown	0.003	1.42
AY610045	XM_001924474	Sus scrofa similar to androgen-induced 1 (LOC100151943)	0.018	1.42
TC248086	Q00994	Unknown	0.040	1.41
TC276293	NM_001077619	Homo sapiens UBX domain protein 2B (UBXN2B)	0.024	1.40
DY428406	NG_016762	Homo sapiens pyruvate dehydrogenase kinase isozyme 3 (PDK3) on chromosome X	0.042	1.40
AK236663	XM_873525	Bos taurus myoferlin transcript variant 12 (FER1L3)	0.031	1.39
DN110652	NM_174525	Beta-crystallin A4	0.041	1.39
BM484590	NM_174492	Bos taurus tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein eta polypeptide (YWHAH)	0.025	1.37
EW109654	NM_170589	Homo sapiens cancer susceptibility candidate 5 (CASC5) transcript variant 1	0.002	1.35
CF361829	A9YMB8	NADH dehydrogenase subunit 2	0.012	1.34
TC270961	Unknown	Unknown	0.024	1.34
LOC733663	Unknown	Unknown	0.037	1.34
CYP3A39	NM_214422	Cytochrome P450 3A39 (CYP3A39)	0.027	1.34
GUCY2C	NM_214105	Guanylate cyclase 2C (GUCY2C)	0.025	1.33
AJ947745	NG_007956	Cytochrome P450 family 20 subfamily A polypeptide 1 (CYP20A1)	0.022	1.33
AY609525	NM_001101198	Chromobox protein homolog 3	0.015	1.32
EW203657	A2AIM8	Talin 1	0.002	1.32
CJ019155	XM_001489617	Equus caballus dedicator of cytokinesis 11 (DOCK11)	0.006	1.32
AK233854	NM_001099022	Bos taurus Era G-protein-like 1 (E. coli) (ERAL1)	0.010	1.32
TC271032	Unknown	Unknown	0.036	1.31
HBE1	EW422073	Hemoglobin subunit epsilon 1 (HBE1)	0.035	1.31
TC267213	Unknown	Unknown	0.026	1.30
TC255027	Unknown	Unknown	0.007	1.30
TC302833	NM_001165887	Homo sapiens zinc finger protein 268 (ZNF268) transcript variant 9	0.021	1.30
EW225983	Unknown	Unknown	0.034	1.28
TC263030	Unknown	Unknown	0.044	1.28
TC272293	Unknown	Unknown	0.019	1.28
AK234630	XM_001927389	Sus scrofa FK506-binding protein (LOC100152728)	0.009	1.27
TC259073	XM_001488075	Equus caballus kelch-like 13 (Drosophila) (KLHL13)	0.021	1.27
BW980922	XM_001113023	Macaca mulatta dUTP pyrophosphatase isoform 2 transcript variant 4 (DUT)	0.021	1.27
ST3GAL-IV	NM_213757	Sus scrofa ST3 beta-galactoside alpha-2,3-sialyltransferase 4 (ST3GAL4) ST3GAL-IV	0.000	1.27

Supplemental Table 1, Continued

Gene ID	Accession No.	Gene name	p-Value	Fold change
TC269098	Unknown	Unknown	0.008	1.27
AW429646	Unknown	Unknown	0.046	1.27
TC260428	Unknown	Unknown	0.019	1.26
AK236998	XM_847200	Canis familiaris similar to nonhistone chromosomal protein HMG-17 (High-mobility group nucleosome binding domain 2) (LOC609853)	0.048	1.26
AK239509	AB529869	Sus scrofa peroxisomal trans-2-enoyl-CoA reductase (PECR)	0.027	1.25
TC259570	Unknown	Unknown	0.017	1.24
TC246828	Unknown	Unknown	0.017	1.24
TC287179	NM_014857	Homo sapiens RAB GTPase activating protein 1-like (RABGAP1L) transcript variant 1 mRNA	0.001	1.24
TC258132	Unknown	Unknown	0.047	1.24
EW484397	NM_001103101	Bos taurus zinc finger protein 502 (ZNF502)	0.025	1.24
TC293624	AM229312	Porcine endogenous retrovirus C complete proviral genome clone PERV-C (1312)	0.032	1.24
TC277299	XM_534651	Canis familiaris similar to M-phase phosphoprotein 9 (LOC477453)	0.037	1.24
BX667232	XM_001925672	Sus scrofa similar to pecanex-like protein 1 (LOC100154536)	0.030	1.23
CN155716	EU617320	Sus scrofa small calcium-binding mitochondrial carrier 1 (SCAMC-1) mRNA	0.038	1.23
EW131859	XM_001498163	Equus caballus similar to ribosomal protein L9 (LOC100055158)	0.001	1.23
AK230973	XM_532879	Canis familiaris similar to DEAD (Asp-Glu-Ala-Asp) box polypeptide 1 transcript variant 1 (LOC475671)	0.047	1.23
AK237164	XM_534550	Canis familiaris similar to CG1218-PA transcript variant 1 (LOC477355)	0.013	1.23
EV880225	DQ629170	Sus scrofa ribosomal protein S6 (RPS6) mRNA	0.017	1.22
CK467702	NM_001035277	Cadherin 13, H-cadherin (heart) (CDH13)	0.013	1.22
AK232944	XM_535692	Canis familiaris similar to CG18769-PB isoform B (LOC478513)	0.018	1.22
TC245796	Unknown	Unknown	0.014	1.22
TC276127	Unknown	Unknown	0.010	1.22
TC292002	XM_001150978	Pan troglodytes similar to LUC7L2 protein transcript variant 3 (LOC739990)	0.049	1.22
TC278978	Unknown	Unknown	0.033	1.22
CK453467	XM_001924194	Sus scrofa similar to WD repeat and HMG-box DNA-binding protein 1 (Acidic nucleoplasmic DNA-binding protein 1) (And-1) (LOC100152808)	0.029	1.21
CD572284	AJ009912	Sus scrofa plp gene	0.006	1.21
BX670823	XM_001494501	Equus caballus similar to replication protein A3 14kDa (LOC100063929)	0.001	1.21
TC270552	XM_001503315	Equus caballus pumilio homolog 2 (Drosophila) (PUM2)	0.050	1.21
TC292269	Unknown	Unknown	0.047	1.21
CF366738	Unknown	Unknown	0.029	1.21
TC272391	Unknown	Unknown	0.033	1.21
CETN3	DN132970	Centrin-3 (CETN3)	0.002	1.20

Supplemental Table 1, Continued

Gene ID	Accession No.	Gene name	p-Value	Fold change
TC287511	NM_145647	Homo sapiens WD repeat domain 67 (WDR67) transcript variant 1	0.015	1.20
BG695764	NM_006122	Homo sapiens mannosidase alpha class 2A member 2 (MAN2A2)	0.011	1.20
TC298854	XM_580298	Bos taurus similar to trinucleotide repeat containing 6C (TNRC6C)	0.033	1.20
AK235662	NG_012170	Homo sapiens RAB23 member RAS oncogene family (RAB23) on chromosome 6	0.043	1.20
BX675945	XM_542777	Canis familiaris similar to SH3 domain-binding protein 5 (SH3 domain-binding protein that preferentially associates with BTK) (LOC485657)	0.033	1.20
TC258084	NM_006690	Homo sapiens matrix metalloproteinase 24 (membrane-inserted) (MMP24)	0.045	1.19
DY437500	NM_015203	Homo sapiens regulation of nuclear pre-mRNA domain containing 2 (RPRD2)	0.026	1.19
TC255075	Unknown	Unknown	0.009	1.19
TC284683	Unknown	Unknown	0.043	1.18
TC287282	Unknown	Unknown	0.033	1.18
EV898729	XR_045439	Sus scrofa misc_RNA (LOC100152987) miscRNA	0.017	1.18
HMGB2	NM_214063	Sus scrofa high mobility group box 2 (HMGB2)	0.045	1.18
DN125568	GQ184633	Sus scrofa cell division cycle 2 variant 1 (CDC2) mRNA	0.048	1.18
TC280036	Unknown	Unknown	0.020	1.17
TC276408	XR_042873	Bos taurus misc_RNA (LOC534434) miscRNA	0.041	1.17
EW299999	XM_001498308	Equus caballus similar to eukaryotic translation elongation factor 1 beta 2 (LOC100068470)	0.015	1.17
GADD45A	NM_001044599	Growth arrest and DNA-damage-inducible protein 45 alpha (GADD45A)	0.044	1.17
BX672323	XM_001927571	Sus scrofa similar to PC4 and SFRS1-interacting protein (Lens epithelium-derived growth factor) (LOC100157597)	0.019	1.17
CN162044	NM_024947	Homo sapiens polyhomeotic homolog 3 (Drosophila) (PHC3)	0.029	1.17
TC277265	XM_001915541	Equus caballus similar to transcription factor E2F3 (E2F-3) (LOC100052248)	0.043	1.16
AK233465	BC102499	Bos taurus LSM8 homolog U6 small nuclear RNA associated (S. cerevisiae) mRNA (cDNA clone MGC:127377 IMAGE:7953297)	0.048	1.16
AY609929	XM_001927909	Sus scrofa similar to DEK oncogene transcript variant 1 (LOC100156871)	0.040	1.16
TC248286	Unknown	Unknown	0.007	1.16
CD572531	XM_001929144	Sus scrofa similar to transmembrane 6 superfamily member 1 (LOC100155238)	0.048	1.16
TC251927	XM_001926317	Sus scrofa similar to TBCC domain containing 1 (LOC100154090)	0.013	1.16
TC274000	Unknown	Unknown	0.037	1.16
EW046833	NR_002211	Homo sapiens Meis homeobox 3 pseudogene 1 (MEIS3P1) non-coding RNA	0.029	1.16
EW304485	XM_531801	Canis familiaris similar to protein phosphatase 1B isoform 2 transcript variant 1 (LOC474573)	0.029	1.15
AY610084	GQ369460	Sus scrofa clone 1 F-box protein 7 (FBXO7) mRNA	0.046	1.15
AY609917	XM_001488642	Equus caballus similar to CCHC-type zinc finger nucleic acid binding protein transcript variant 1 (LOC100050146)	0.049	1.15
RPS29	NM_001001633	Ribosomal protein S 29 (RPS29)	0.031	1.15

Supplemental Table 1, Continued

Gene ID	Accession No.	Gene name	<i>p</i> -Value	Fold change
DB800055	XM_001490197	Equus caballus cytidine and dCMP deaminase domain containing 1 (CDADC1)	0.040	1.15
ANG2	NM_213808	Angiopoietin 2 (ANG2)	0.046	1.14
CK467169	XM_001926109	Sus scrofa similar to SNX25 protein (LOC100157280)	0.018	1.14
TC258796	XM_001928025	Sus scrofa Calcineurin A protein transcript variant 2 (LOC396603)	0.049	1.14
AK235945	XM_001928672	Sus scrofa similar to FRA10AC1 protein transcript variant 1 (LOC100152110)	0.027	1.14
LOC414417	NM_001001635	Sus scrofa translation factor sui1-like protein (LOC414417)	0.040	1.14
AK230600	NM_001101220	Bos taurus dynein light chain Tctex-type 3 (DYNLT3)	0.026	1.13
EW593120	NM_001137619	Sus scrofa ribosomal protein S3A (RPS3A) mRNA	0.018	1.13
SCYE1	NM_001114283	Sus scrofa aminoacyl tRNA synthetase complex-interacting multifunctional protein 1 (AIMP1)	0.026	1.12
TC281417	XM_876757	Bos taurus similar to Heterogeneous nuclear ribonucleoprotein H (hnRNP H) transcript variant 26 (HNRPH1)	0.044	1.12
TC285283	XM_001493049	Equus caballus similar to pinin desmosome associated protein (LOC100060952)	0.020	1.12
TC248717	XM_001926594	Sus scrofa similar to ring finger protein 20 (LOC100154259)	0.040	1.12
TCTP	NM_214373	Translationally-controlled tumor protein (TCTP)	0.027	1.12
AJ659363	XM_001925659	Sus scrofa similar to MGC165949 protein (LOC100158143)	0.036	1.11
AY609728	BC112734	Bos taurus mitochondrial ribosomal protein L30 mRNA (cDNA clone MGC:137661 IMAGE:8165094)	0.034	1.09

\* Determined by the microarray analysis of gene expression.