

Supplementary Materials:

Supplementary Table S1. Summary of DEGs affected by both G9P[13] and G5P[7] strains. Genes are shown with '↓' and '↑' referring to down or upregulation, respectively. These are also depicted with red arrows signifying upregulation, and blue representing down regulation. Differentially expressed genes are bolded. The upregulated/downregulated genes were determined using a cut off $\pm \geq 2$ or ≤ 2 when respectively compared with the control group (non-treated). All genes listed account for active protein coding.

Gene Symbol	Description	G5P[7]	G9P[13]
ABCG2	ATP-binding cassette, sub-family G (WHITE), member 2	↓	↑
ABCG5	ATP binding cassette subfamily G member 5, transcript variant X1	↓	↑
ABCG8	ATP binding cassette subfamily G member 8, transcript variant X1	↓	↑
ANPEP	alanyl aminopeptidase, membrane	↓	↑
AOC1	amine oxidase, copper containing 1, transcript variant X5	↓	↑
BATF3	basic leucine zipper ATF-like transcription factor 3	↓	↓
C1H9orf16	chromosome 1 C9orf16 homolog	↑	↑
C6H19orf81	chromosome 6 C19orf81 homolog, transcript variant X1	↑	↑
C8H4orf48	chromosome 8 C4orf48 homolog	↑	↑
CATSPER4	cation channel sperm associated 4	↓	↑
CDK5R1	cyclin dependent kinase 5 regulatory subunit 1	↓	↓
CFAP61	cilia and flagella associated protein 61, transcript variant X3	↓	↓
CLIC5	chloride intracellular channel 5	↓	↑
CMC4	C-X9-C motif containing 4, transcript variant X1	↑	↑
CNTNAP2	contactin associated protein-like 2	↓	↑
CORO2B	coronin 2B, transcript variant X2	↓	↓
CPA6	carboxypeptidase A6, transcript variant X1	↓	↓
CRTAC1	cartilage acidic protein 1, transcript variant X2	↑	↑
CSDC2	cold shock domain containing C2	↓	↑
CYP26A1	cytochrome P450, family 26, subfamily A, polypeptide 1	↓	↓
CYS1	cystin 1	↑	↑
DCST1	DC-STAMP domain containing 1	↓	↑
DENND1C	DENN domain containing 1C	↓	↓
DENND2A	DENN domain containing 2A, transcript variant X5	↓	↓
DPCR1	diffuse panbronchiolitis critical region 1	↓	↑
EGR2	early growth response 2	↓	↓
ELMOD1	ELMO domain containing 1, transcript variant X4	↓	↓
ENKD1	enkurin domain containing 1, transcript variant X1	↑	↑
FAM129C	family with sequence similarity 129 member C	↑	↑
FAM25A	family with sequence similarity 25 member A	↑	↑
FAM71E1	family with sequence similarity 71 member E1, transcript variant X2	↑	↑
FAR2	fatty acyl-CoA reductase 2, transcript variant X1	↓	↑
FGF22	fibroblast growth factor 22	↑	↑
FOSB	FosB proto-oncogene, AP-1 transcription factor subunit	↑	↑
FOXH1	forkhead box H1, transcript variant X3	↑	↑
GAREM2	GRB2 associated regulator of MAPK1 subtype 2, transcript variant X2	↓	↓
GGN	gametogenetin	↑	↑

GGT5	gamma-glutamyltransferase 5, transcript variant X2	↑	↑
GPAT2	glycerol-3-phosphate acyltransferase 2, mitochondrial, transcript variant X3	↑	↑
GPR156	G protein-coupled receptor 156, transcript variant X6	↓	↓
HDAC9	histone deacetylase 9, transcript variant X22	↓	↓
HHLA2	HERV-H LTR-associating 2, transcript variant X22	↓	↑
HMGCS2	3-hydroxy-3-methylglutaryl-CoA synthase 2	↓	↑
IFIT1	interferon-induced protein with tetratricopeptide repeats 1	↓	↓
IGFBP3	insulin like growth factor binding protein 3	↓	↓
JPH1	junctophilin 1, transcript variant X1	↓	↓
KIF1A	kinesin family member 1A	↓	↑
LEAP2	liver enriched antimicrobial peptide 2	↑	↑
LEKR1	leucine, glutamate and lysine rich 1, transcript variant X1	↑	↑
LRRC23	leucine rich repeat containing 23, transcript variant X2	↑	↑
LRRC31	leucine rich repeat containing 31, transcript variant X2	↑	↑
LTB4R	leukotriene B4 receptor, transcript variant X1	↓	↑
LTF	lactotransferrin	↓	↓
MAF	MAF bZIP transcription factor, transcript variant X1	↓	↑
MCAM	melanoma cell adhesion molecule, transcript variant X3	↓	↓
MDFI	MyoD family inhibitor, transcript variant X4	↓	↓
MIA	melanoma inhibitory activity, transcript variant X1	↓	↓
MIR7138	ssc-miR-7138-3p	↓	↓
MOGAT2	monoacylglycerol O-acyltransferase 2	↓	↑
MRC1	mannose receptor C-type 1	↓	↑
MTERF2	mitochondrial transcription termination factor 2	↓	↓
MTTP	microsomal triglyceride transfer protein	↓	↑
MUC12	mucin 12, cell surface associated	↓	↑
MYH15	myosin heavy chain 15	↑	↓
NAGS	N-acetylglutamate synthase	↓	↑
NEURL3	neuralized E3 ubiquitin protein ligase 3	↑	↑
NKX3-2	NK3 homeobox 2	↓	↓
OASL	2'-5'-oligoadenylate synthetase like	↑	↑
ONECUT2	one cut homeobox 2	↑	↑
OVGP1	oviductal glycoprotein 1	↓	↓
PCDH7	protocadherin 7	↓	↓
PDGFR	platelet derived growth factor receptor like, transcript variant X1	↓	↓
PECAM1	platelet and endothelial cell adhesion molecule 1	↓	↓
PIK3CG	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit gamma	↓	↓
PIRT	phosphoinositide interacting regulator of transient receptor potential channels, transcript variant X2	↑	↑
PLBD1	phospholipase B domain containing 1	↓	↓
PLPPR2	phospholipid phosphatase related 2, transcript variant X1	↑	↑
PPP1R36	protein phosphatase 1 regulatory subunit 36, transcript variant X1	↓	↓
RAB39A	RAB39A, member RAS oncogene family, transcript variant X1	↓	↓
RAB4B	RAB4B, member RAS oncogene family, transcript variant X1	↑	↑
RET	ret proto-oncogene	↓	↓

RGL1	ral guanine nucleotide dissociation stimulator like 1, transcript variant X2	↓	↓
RGS16	regulator of G protein signaling 16	↑	↑
RLN3	relaxin 3	↑	↑
ROM1	retinal outer segment membrane protein 1	↑	↑
RSPH1	radial spoke head 1 homolog, transcript variant X3	↓	↓
RSPH9	radial spoke head 9 homolog, transcript variant X2	↑	↑
RTN4RL1	reticulon 4 receptor like 1, transcript variant X1	↓	↓
SCNN1A	sodium channel epithelial 1 alpha subunit	↑	↑
SECTM1	secreted and transmembrane 1	↑	↑
SLA-5	MHC class I antigen 5	↑	↑
SLC10A4	solute carrier family 10 member 4	↓	↓
SLC26A7	solute carrier family 26 member 7, transcript variant X5	↑	↑
SLC30A10	solute carrier family 30 member 10	↑	↑
SLC35G2	solute carrier family 35 member G2, transcript variant X1	↓	↓
SLC51B	solute carrier family 51 beta subunit, transcript variant X1	↓	↑
SLC6A4	solute carrier family 6 member 4, transcript variant X1	↓	↑
SNAI1	snail family transcriptional repressor 1	↑	↑
SNX22	sorting nexin 22, transcript variant X2	↓	↓
SPDEF	SAM pointed domain containing ets transcription factor	↑	↑
ST18	ST18, C2H2C-type zinc finger, transcript variant X18	↓	↓
STAG3	stromal antigen 3, transcript variant X2	↑	↑
STARD7	StAR related lipid transfer domain containing 7	↓	↓
SYBU	syntabulin	↑	↑
SYT12	synaptotagmin 12, transcript variant X4	↑	↑
TEX14	testis expressed 14, intercellular bridge forming factor	↓	↓
TFF2	trefoil factor 2	↑	↑
TGM3	transglutaminase 3	↑	↑
TMCO2	transmembrane and coiled-coil domains 2	↑	↑
TMEM255B	transmembrane protein 255B, transcript variant X2	↑	↑
TMEM88B	transmembrane protein 88B	↑	↑
TREX2	three prime repair exonuclease 2, transcript variant X2	↓	↑
TRIM31	tripartite motif containing 31	↓	↑
TUBAL3	tubulin alpha like 3	↓	↑
WFIKKN1	WAP, follistatin/kazal, immunoglobulin, kunitz and netrin domain containing 1	↑	↑