

Genes repressed in rabbit ileal loops

Protein synthesis

Gene Description	Gene ID
ribosomal protein L28 (rpmB)	VC0218
ribosomal protein L33 (rpmG)	VC0219
ribosomal protein L11 (rplK)	VC0324
ribosomal protein L1 (rplA)	VC0325
ribosomal protein L10 (rplJ)	VC0326
ribosomal protein L7/L12 (rplL)	VC0327
ribosomal protein S12 (rpsL)	VC0359
ribosomal protein S7 (rpsG)	VC0360
ribosomal protein S6 (rpsF)	VC0366
ribosomal protein S18 (rpsR)	VC0368
ribosomal protein L9 (rplI)	VC0369
ribosomal protein L21 (rplU)	VC0435
ribosomal protein L27 (rpmA)	VC0436
ribosomal protein S21 (rpsU)	VC0520
ribosomal protein S16 (rpsP)	VC0561
ribosomal protein L19 (rplS)	VC0564
ribosomal protein L13 FRAMESHIFT (rplM)	VC0570
ribosomal protein S9 (rpsI)	VC0571
ribosomal protein S15 (rpsO)	VC0646
ribosomal protein S20 (rpsT)	VC0679
ribosomal protein L25 (rplY)	VC1640
ribosomal protein S1 (rpsA)	VC1915
ribosomal protein S2 (rpsB)	VC2260
ribosomal protein L17 (rplQ)	VC2570
ribosomal protein S4 (rpsD)	VC2572
ribosomal protein S11 FRAMESHIFT (rpsK)	VC2573
ribosomal protein S13 (rpsM)	VC2574
ribosomal protein L15 (rplO)	VC2577
ribosomal protein L30 (rpmD)	VC2578
ribosomal protein S5 (rpsE)	VC2579
ribosomal protein L18 (rplR)	VC2580
ribosomal protein L6 (rplF)	VC2581
ribosomal protein S8 (rpsH)	VC2582
ribosomal protein S14 (rpsN)	VC2583
ribosomal protein L5 (rplE)	VC2584
ribosomal protein L24 (rplX)	VC2585
ribosomal protein L14 (rplN)	VC2586
ribosomal protein S17 (rpsQ)	VC2587
ribosomal protein L29 (rpmC)	VC2588
ribosomal protein L16 (rplP)	VC2589
ribosomal protein S3 (rpsC)	VC2590
ribosomal protein L22 (rplV)	VC2591
ribosomal protein S19 (rpsS)	VC2592

ribosomal protein L2 (rplB)	VC2593
ribosomal protein L23 (rplW)	VC2594
ribosomal protein L4 (rplD)	VC2595
ribosomal protein L3 (rplC)	VC2596
ribosomal protein S10 (rpsJ)	VC2597
ribosomal protein L31 (rpmE)	VC2679
ribosomal protein L35 (rpmI)	VCA0289
ribosomal protein L20 (rplT)	VCA0290
ribosomal large subunit pseudouridine synthase A (rluA-1)	VC2505
glycyl-tRNA synthetase, beta chain (glyS)	VC0020
glycyl-tRNA synthetase, alpha chain (glyQ)	VC0021
alanyl-tRNA synthetase (alaS)	VC0545
tRNA (guanine-N1)-methyltransferase	VC0563
tyrosyl-tRNA synthetase (tyrS)	VC0631
S-adenosylmethionine:tRNA ribosyltransferase	VC0739
queuine tRNA-ribosyltransferase (tgt)	VC0741
prolyl-tRNA synthetase (proS)	VC0875
leucyl-tRNA synthetase (leuS)	VC0956
glutaminyl-tRNA synthetase (glnS)	VC0997
methionyl-tRNA synthetase (metG)	VC1036
seryl-tRNA synthetase (serS)	VC1110
aspartyl-tRNA synthetase (aspS)	VC1166
phenylalanyl-tRNA synthetase, alpha chain (pheS)	VC1219
phenylalanyl-tRNA synthetase, beta chain (pheT)	VC1220
asparaginyl-tRNA synthetase (asnS)	VC1297
glutamyl-tRNA synthetase (gltX)	VC2214
valyl-tRNA synthetase (valS)	VC2503
threonyl-tRNA synthetase (thrS)	VCA0287
elongation factor Tu (tufB)	VC0321
elongation factor G (fusA)	VC0361
elongation factor TU (tufA)	VC0362
elongation factor P family protein	VC1209
elongation factor Ts (tsf)	VC2259
elongation factor G (fusA)	VC2342
peptide chain release factor 2, FRAMESHIFT	VC0663
initiation factor IF-2 (infB)	VC0643
initiation factor IF-1 (infA)	VC1737
initiation factor IF3, POINTMUTATION	VCA0288

Protein Fate

chaperone protein HscA (hscA)	VC0752
chaperonin, 10 Kd subunit (groES)	VCA0819
chaperonin, 10 Kd subunit (groES)	VC2665
chaperonin, 60 Kd subunit (groEL)	VCA0820
chaperonin, 60 Kd subunit (groEL)	VC2664
16 kDa heat shock protein A (ibpA)	VC0018
heat shock protein HtpG (htpG)	VC0985
heat shock protein GrpE (grpE)	VC0854

dnaK suppressor protein (dksA)	VC0596
dnaK protein (dnaK) { <i>Vibrio cholerae</i> }	VC0855
DnaK-related protein	VC1374
peptidyl-prolyl cis-trans isomerase, FKBP-type (fkpA)	VC0354
peptidyl-prolyl cis-trans isomerase, FKBP-type (fkIB)	VC2568
trigger factor (tig) { <i>Escherichia coli</i> }	VC1923
preprotein translocase, SecE subunit (secE)	VC0322
preprotein translocase, SecG subunit (secG)	VC0640
preprotein translocase, SecY subunit (secY)	VC2576
preprotein translocase, SecA subunit (secA)	VC2394
protein-export membrane protein SecD (secD)	VC0743
protein-export membrane protein SecF (secF)	VC0744
protein-transport protein SecB (secB)	VC2653
peptide methionine sulfoxide reductase (msrA)	VC2549
polypeptide deformylase (def)	VC0046
thiol:disulfide interchange protein (tpcG)	VC0034
clpB protein (clpB) { <i>Escherichia coli</i> }	VC0711
protease HslVU, ATPase subunit HslU	VC2674
protease HslVU, subunit HslV (hslV)	VC2675
trypsin, putative { <i>Mus musculus</i> }	VC1649
protease, putative { <i>Escherichia coli</i> }	VC0717
ATP-dependent protease LA (lon) { <i>Vibrio cholerae</i> }	VC1920
ATP-dependent Clp protease, ATP-binding subunit (clpX)	VC1921
ATP-dependent Clp protease, proteolytic subunit (clpP)	VC1922
oligopeptidase A (prC)	VC0188
peptidase B (pepB) { <i>Escherichia coli</i> }	VC0755
methionine aminopeptidase (map)	VC2261
aminopeptidase A/I (pepA)	VC2501

Transporter and binding protein

ABC transporter, ATP-binding protein	VC0698
ABC transporter, ATP-binding protein	VC0589
ABC transporter, ATP-binding protein	VC2520
spermidine/putrescine ABC transporter (potD-2)	VC1425
spermidine/putrescine ABC transporter (potA)	VC1428
spermidine/putrescine ABC transporter (potD-1)	VC1424
tyrosine-specific transport protein (tyrP)	VCA0772
multidrug resistance protein, putative	VC1409
ferric vibriobactin-binding protein (irgA)	VC0475
vitamin B12 receptor (btuB)	VC0156
sodium/alanine symporter	VC2356
formate transporter 1, putative	VC1695
long-chain fatty acid transport protein (fadL-3)	VCA0862
long-chain fatty acid transport protein (fadL-2)	VC1043
lipopolysaccharide/O-antigen transport protein (rfbH)	VC0246

Cellular process

antioxidant, AhpC/Tsa family	VC0731
superoxide dismutase, Fe (sodB)	VC2045
septum site-determining protein MinD	VC1960
cell division protein FtsJ (ftsJ)	VC0636

Energy Metabilism

ATP synthase F1, epsilon subunit (atpC)	VC2763
ATP synthase F1, beta subunit (atpD)	VC2764
ATP synthase F1, gamma subunit (atpG)	VC2765
ATP synthase F1, alpha subunit (atpA)	VC2766
ATP synthase F1, delta subunit (atpH)	VC2767
ATP synthase F0, B subunit (atpF)	VC2768
ATP synthase F0, C subunit (atpE)	VC2769
ATP synthase F0, A subunit (atpB)	VC2770
ATP synthase protein I (atpI)	VC2771
NADH:ubiquinone oxidoreductase, Na translocating (nqrF)	VC2290
NADH:ubiquinone oxidoreductase, Na translocating (nqrE)	VC2291
NADH:ubiquinone oxidoreductase, Na translocating (nqrD)	VC2292
NADH:ubiquinone oxidoreductase, Na translocating (nqrC)	VC2293
NADH:ubiquinone oxidoreductase, Na translocating (nqrB)	VC2294
NADH:ubiquinone oxidoreductase, Na translocating (nqrA)	VC2295
cytochrome d ubiquinol oxidase, subunit II (cydB-1)	VC1843
cytochrome d ubiquinol oxidase, subunit I (cydA-1)	VC1844
cytochrome c5 {Azotobacter vinelandii}	VC0168
cytochrome c4 {Pseudomonas stutzeri}	VC0112
ubiquinol--cytochrome c reductase, iron-sulfur subunit (petA)	VC0573
Flavodoxin 1 (fldA) {Escherichia coli}	VC2099
thioredoxin (trxA) {Escherichia coli}	VC0306
thioredoxin 2 (trxC) {Escherichia coli}	VCA0752
thioredoxin reductase (trxB)	VC1182
NADH dehydrogenase (ndh)	VC1890
Glutaredoxin (grxA)	VC1146
pyruvate dehydrogenase, E3 component (lpdA)	VC2412
pyruvate dehydrogenase, E2 component (aceF)	VC2413
pyruvate dehydrogenase, E1 component (aceE)	VC2414
2-oxoglutarate dehydrogenase, E1 component (sucA)	VC2087
transaldolase B (talB)	VCA0623
glucose-6-phosphate 1-dehydrogenase (zwf)	VCA0896
6-phosphogluconate dehydrogenase, decarboxylating (gnd)	VCA0898
trehalose-6-phosphate hydrolase (treC)	VC0911
malate oxidoreductase, putative	VC2681
acetate kinase (ackA) {Escherichia coli}	VCA0235
acetate kinase (ackA) {Escherichia coli}	VC1098
phosphate acetyltransferase (pta)	VC1097
iron-containing alcohol dehydrogenase family protein RfbM	VC0250

Regulatory function

factor-for-inversion stimulation protein (fis)	VC0290
gluconate utilization system gnt-I transcriptional repressor (gntR)	VC0289
GTP-binding protein TypA (typA)	VC2744
pyruvate dehydrogenase complex repressor (pdhR)	VC2415

Transcription

DNA-directed RNA polymerase, beta subunit	VC0328
DNA-directed RNA polymerase, beta' subunit	VC0329
DNA-directed RNA polymerase, alpha subunit	VC2571
DNA-directed RNA polymerase, omega subunit	VC2709
RNA polymerase-associated protein HepA	VC2506
RNA polymerase sigma factor RpoD (rpoD)	VC0517
ATP-dependent RNA helicase SrmB (srmB)	VC0660
transcription antitermination protein NusG (nusG)	VC0323
transcription elongation factor GreA (greA)	VC0634
ribosome-binding factor A (rbfA)	VC0644
16S rRNA processing protein RimM (rimM)	VC0562

DNA metabolism

exodeoxyribonuclease III (xth)	VC1860
A/G-specific adenine glycosylase (mutY)	VC0452
ATP-dependent DNA helicase Rep (rep)	VC0167
recR protein, FRAMESHIFT (recR)	VC1056
DNA-binding protein HU (hupA)	VC0273
DNA gyrase, subunit A, FRAMESHIFT (gyrA)	VC1258
primosomal replication protein N (priB)	VC0367

Purine, pyrimidines, nucleosides, and nucleotides

uridylyl kinase (pyrH) {Escherichia coli}	VC2258
uridine kinase (udk) {Escherichia coli}	VC1038
purine nucleoside phosphorylase (deoD-2)	VCA0053
purine nucleoside phosphorylase (deoD-1)	VC2347
UTP--glucose-1-phosphate uridylyltransferase (galU)	VC0395
adenosine deaminase (add) {Escherichia coli}	VC2751
cytidylate kinase (cmk) {Escherichia coli}	VC1916
inosine-guanosine kinase (gsk)	VC1129
adenylate kinase (adk) {Escherichia coli}	VC0986
adenylosuccinate synthetase (purA)	VC2602
ribonucleoside-diphosphate reductase, β subunit (nrdB)	VC1255
ribonucleoside-diphosphate reductase, α subunit (nrdA)	VC1256

Fatty acid and phospholipid metabolism

acetyl-CoA carboxylase, carboxyl transferase α subunit (accA)	VC2244
acetyl-CoA carboxylase, biotin carboxyl carrier protein (accB)	VC0296

acetyl-CoA carboxylase, biotin carboxylase (accC)	VC0295
acetyl-CoA carboxylase, carboxyl transferase β subunit (accD)	VC1000
myo-inositol-monophosphatase	VC0745
(3R)-hydroxymyristoyl-(acyl-carrier-protein)dehydratase (fabZ)	VC2249
lipase, putative { <i>Aeromonas hydrophila</i> }	VCA0863
3-oxoacyl-(acyl-carrier-protein) synthase (fabF)	VC2019
acyl carrier protein (acp)	VC2020
3-oxoacyl-(acyl-carrier-protein) reductase (fabG)	VC2021
malonyl Coa-acyl carrier protein transacylase (fabD)	VC2022
3-oxoacyl-(acyl-carrier-protein) synthase (fabH-1)	VC2023
3-oxoacyl-(acyl-carrier-protein) synthase (fabB)	VC2109
acyl protein synthase/acyl-CoA reductase RfbN	VC0251
acyl carrier protein, putative { <i>Vibrio cholerae</i> }	VC0248

Cell envelope

outer membrane protein OmpA (ompA) { <i>Vibrio cholerae</i> }	VC2213
outer membrane protein OmpH (ompH)	VC2251
GDP-mannose 4,6-dehydratase (rfbD) { <i>Vibrio cholerae</i> }	VC0243
UDP-3-O-3-hydroxymyristoyl glucosamine N-acetransferase (firA)	VC2250
lipoprotein, putative { <i>Escherichia coli</i> }	VC1195
inner membrane protein, 60 kDa (yidC)	VC0004
peptidoglycan-associated lipoprotein	VC1835

Amino acid biosynthesis

3-dehydroquinate dehydratase (aroQ)	VC0297
shikimate kinase (aroK) { <i>Escherichia coli</i> }	VC2629
glutamate--ammonia ligase (glnA) { <i>Vibrio cholerae</i> }	VC2746
aspartate aminotransferase (aspC)	VC1293
Glutamate 5-kinase (proB)	VC2274
serine hydroxymethyltransferase (glyA)	VC0941
N-acetylglutamate synthase (argA)	VC2316

Biosynthesis of cofactor

lipoic acid synthetase (lipA)	VC0943
lipoate-protein ligase B (lipB)	VC0944
uroporphyrin-III C-methyltransferase (cysG)	VC2561
nicotinate phosphoribosyltransferase (pncB)	VCA0098
thiamin biosynthesis protein Thil (thil)	VC0894
riboflavin synthase, beta subunit (ribH)	VC2268

Central intermediary metabolism

agmatinase (speB) { <i>Escherichia coli</i> }	VCA0814
biosynthetic arginine decarboxylase (speA)	VCA0815
inorganic pyrophosphatase (ppa)	VC2545
sulfate adenylate transferase, subunit 2 (cysD)	VC2560

aminotransferase, class III/decarboxylase, groupII	VC1625
acetyltransferase RfbO, CysE/LacA/LpxA/NodL family, framshift	VC0252

Unknown, hypothetical and conserved hypothetical

GGDEF family protein	VC1376
NifR3/Smm1 family protein	VC0291
cyaY protein (cyaY)	VC0123
methyltransferase-related protein	VC0113
rfbL protein (rfbL) {Vibrio cholerae}	VC0249
rfbG protein (rfbG) {Vibrio cholerae}	VC0245
hesB family protein	VC0750
GTP-binding protein {Escherichia coli}	VC2185
GTP-binding protein LepA (lepA)	VC2463
glucose inhibited division protein A (gidA)	VC2775
hypothetical protein	VC0314
hypothetical protein	VC0569
hypothetical protein	VC0713
hypothetical protein	VC0740
hypothetical protein	VC1201
hypothetical protein	VC1375
hypothetical protein	VC1738
hypothetical protein	VC1739
hypothetical protein	VC1924
hypothetical protein	VC2098
hypothetical protein	VC2753
hypothetical protein	VCA0005
hypothetical protein	VCA0652
conserved hypothetical protein	VC0114
conserved hypothetical protein	VC0115
conserved hypothetical protein	VC0127
conserved hypothetical protein	VC0134
conserved hypothetical protein	VC0453
conserved hypothetical protein	VC0519
conserved hypothetical protein	VC0641
conserved hypothetical protein	VC0742
conserved hypothetical protein	VC0770
conserved hypothetical protein	VC0962
conserved hypothetical protein	VC0977
conserved hypothetical protein	VC1055
conserved hypothetical protein FRAMESHIFT	VC1079
conserved hypothetical protein	VC1259
conserved hypothetical protein	VC1358
conserved hypothetical protein	VC2026
conserved hypothetical protein	VC2620
conserved hypothetical protein	VC2654
conserved hypothetical protein	VC2706
conserved hypothetical protein FRAMESHIFT	VC2716
conserved hypothetical protein	VC2735
conserved hypothetical protein	VC2736

conserved hypothetical protein
conserved hypothetical protein

VCA0006
VCA1021