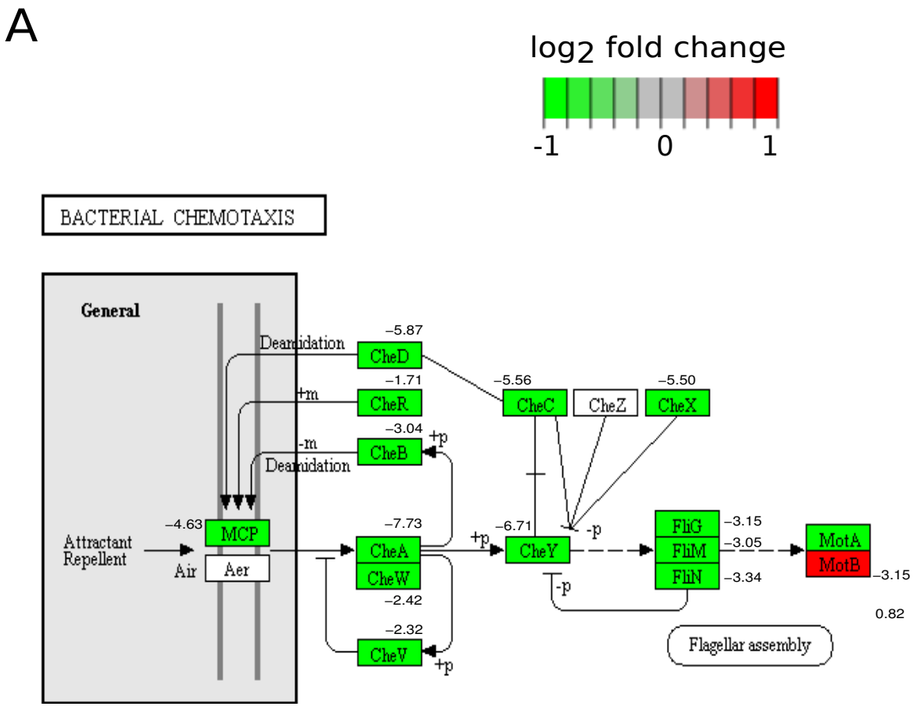
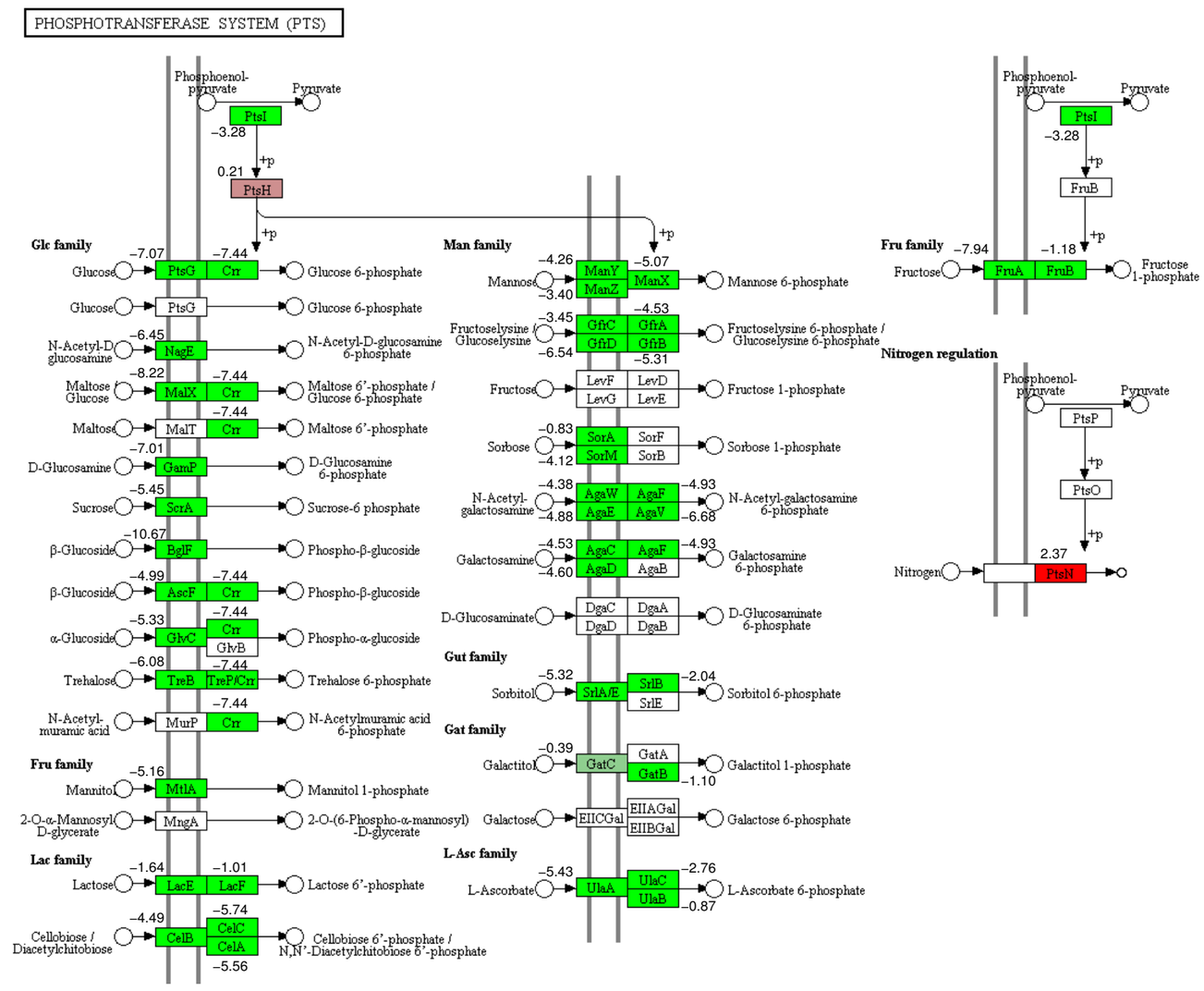
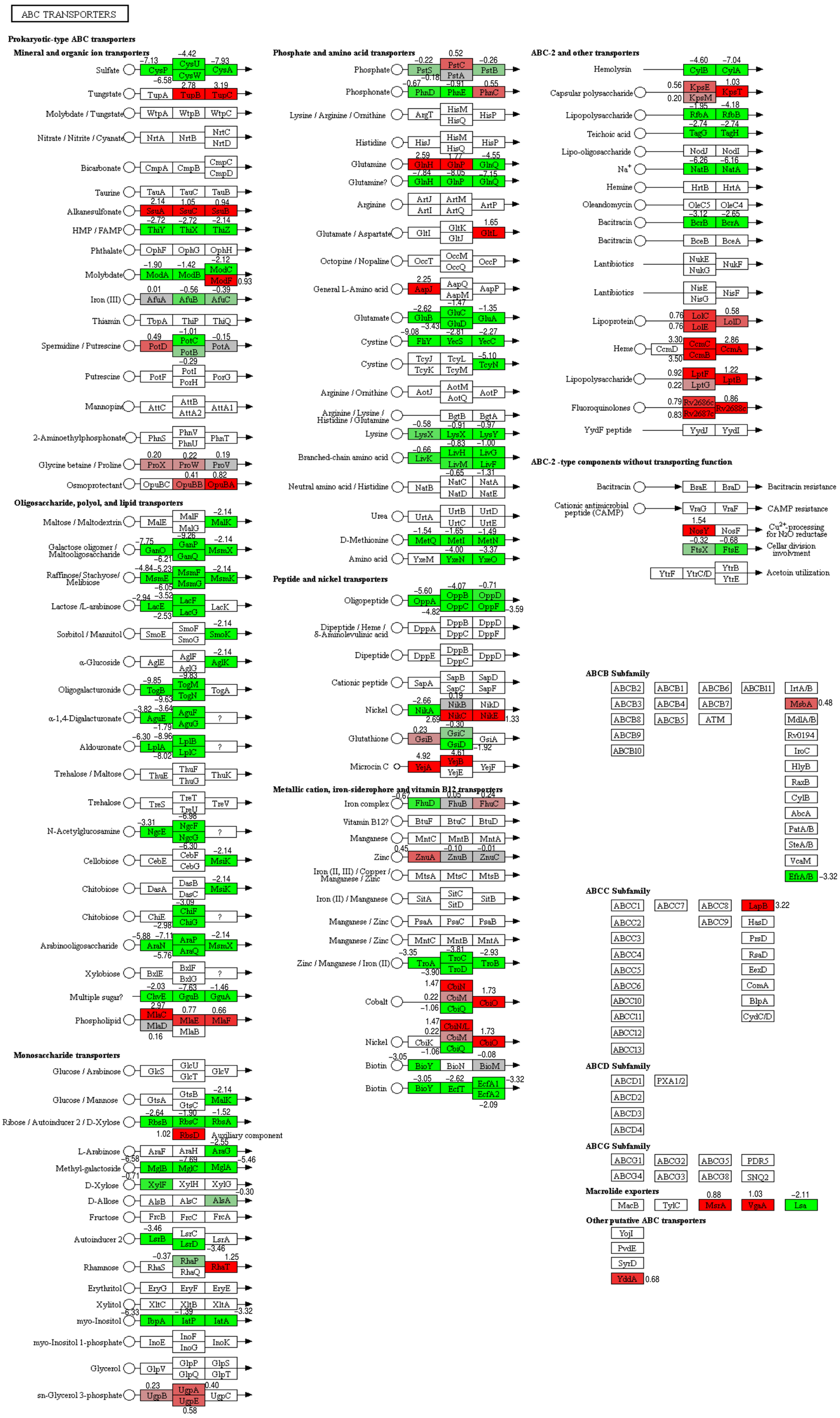
A


log2 fold change
-1
0
1
BACTERIAL CHEMOTAXIS
General
Deamidation
Deamidation
Attractant
Repellent
Air
MCP
Aer
CheD
CheR
CheB
CheA
CheW
CheV
CheC
CheZ
CheX
CheY
FliG
FliM
FliN
MotA
MotB
Flagellar assembly
-5.87
-1.71
-3.04
-4.63
-7.73
-2.42
-2.32
-5.56
-5.50
-6.71
-3.15
-3.05
-3.34
-3.15
0.82

B


PHOSPHOTRANSFERASE SYSTEM (PTS)
Phosphoenol-pyruvate
Pyruvate
PtsI
PtsH
Glc family
Man family
Fru family
Gut family
Gat family
L-Asc family
Nitrogen regulation
PtsG
Crr
NagE
MalX
MalT
GamP
ScrA
BglF
AscF
GlvC
GlvB
TreB
TreP
MurP
MtlA
MngA
LacE
LacF
CelB
CelC
CelA
ManY
ManZ
ManX
GfrC
GfrA
GfrD
GfrB
LevF
LevD
LevG
LevE
SorA
SorF
SorM
SorB
AgaW
AgaF
AgaE
AgaV
AgaC
AgaF
AgaD
AgaB
DgaC
DgaA
DgaD
DgaB
SrlA/E
SrlB
SrlE
GatC
GatA
GatB
EIICGal
EIIAGal
EIIBGal
UlaA
UlaC
UlaB
FruB
FruA
FruB
PtsP
PtsO
PtsN
Glucose
Glucose 6-phosphate
N-Acetyl-D-glucosamine
N-Acetyl-D-glucosamine 6-phosphate
Maltose / Glucose
Maltose 6'-phosphate / Glucose 6-phosphate
Maltose
Maltose 6'-phosphate
D-Glucosamine
D-Glucosamine 6-phosphate
Sucrose
Sucrose-6 phosphate
β-Glucoside
Phospho-β-glucoside
α-Glucoside
Phospho-α-glucoside
Trehalose
Trehalose 6-phosphate
N-Acetyl-muramic acid
N-Acetylmuramic acid 6-phosphate
Mannitol
Mannitol 1-phosphate
2-O-α-Mannosyl D-glycerate
2-O-(6-Phospho-α-mannosyl) -D-glycerate
Lactose
Lactose 6'-phosphate
Cellobiose / Diacetylchitobiose
Cellobiose 6'-phosphate / N,N'-Diacetylchitobiose 6'-phosphate
Mannose
Mannose 6-phosphate
Fructoselysine / Glucoselysine
Fructoselysine 6-phosphate / Glucoselysine 6-phosphate
Fructose
Fructose 1-phosphate
Sorbose
Sorbose 1-phosphate
N-Acetyl-galactosamine
N-Acetyl-galactosamine 6-phosphate
Galactosamine
Galactosamine 6-phosphate
D-Glucosaminate
D-Glucosaminate 6-phosphate
Sorbitol
Sorbitol 6-phosphate
Galactitol
Galactitol 1-phosphate
Galactose
Galactose 6-phosphate
L-Ascorbate
L-Ascorbate 6-phosphate
Fructose
Fructose 1-phosphate
Nitrogen
-7.07
-7.44
-6.45
-8.22
-7.01
-5.45
-10.67
-4.99
-5.33
-6.08
-5.16
-1.64
-1.01
-4.49
-5.74
-5.56
-4.26
-5.07
-3.40
-3.45
-4.53
-6.54
-5.31
-0.83
-4.12
-4.38
-4.93
-4.88
-6.68
-4.53
-4.60
-5.32
-2.04
-0.39
-1.10
-7.94
-1.18
-3.28
0.21
2.37

C


ABC TRANSPORTERS
Prokaryotic-type ABC transporters
Mineral and organic ion transporters
Sulfate
Tungstate
Molybdate / Tungstate
Nitrate / Nitrite / Cyanate
Bicarbonate
Taurine
Alkanesulfonate
HMP / FAMP
Phthalate
Molybdate
Iron (III)
Thiamin
Spermidine / Putrescine
Putrescine
Mannopine
2-Aminoethylphosphonate
Glycine betaine / Proline
Osmoprotectant
Oligosaccharide, polyol, and lipid transporters
Maltose / Maltodextrin
Galactose oligomer / Maltooligosaccharide
Raffinose/ Stachyose/ Melibiose
Lactose /L-arabinose
Sorbitol / Mannitol
α-Glucoside
Oligogalacturonide
α-1,4-Digalacturonate
Aldouronate
Trehalose / Maltose
Trehalose
N-Acetylglucosamine
Cellobiose
Chitobiose
Chitobiose
Arabinooligosaccharide
Xylobiose
Multiple sugar?
Phospholipid
Monosaccharide transporters
Glucose / Arabinose
Glucose / Mannose
Ribose / Autoinducer 2 / D-Xylose
L-Arabinose
Methyl-galactoside
D-Xylose
D-Allose
Fructose
Autoinducer 2
Rhamnose
Erythritol
Xylitol
myo-Inositol
myo-Inositol 1-phosphate
Glycerol
sn-Glycerol 3-phosphate
Phosphate and amino acid transporters
Phosphate
Phosphonate
Lysine / Arginine / Ornithine
Histidine
Glutamine
Glutamine?
Arginine
Glutamate / Aspartate
Octopine / Nopaline
General L-Amino acid
Glutamate
Cystine
Cystine
Arginine / Ornithine
Arginine / Lysine / Histidine / Glutamine
Lysine
Branched-chain amino acid
Neutral amino acid / Histidine
Urea
D-Methionine
Amino acid
Peptide and nickel transporters
Oligopeptide
Dipeptide / Heme / δ-Aminolevulinic acid
Dipeptide
Cationic peptide
Nickel
Glutathione
Microcin C
Metallic cation, iron-siderophore and vitamin B12 transporters
Iron complex
Vitamin B12?
Manganese
Zinc
Iron (II, III) / Copper / Manganese / Zinc
Iron (II) / Manganese
Manganese / Zinc
Zinc / Manganese / Iron (II)
Cobalt
Nickel
Biotin
Biotin
ABC-2 and other transporters
Hemolysin
Capsular polysaccharide
Lipopolysaccharide
Teichoic acid
Lipo-oligosaccharide
Na+
Hemine
Oleandomycin
Bacitracin
Bacitracin
Lantibiotics
Lantibiotics
Lipoprotein
Heme
Lipopolysaccharide
Fluoroquinolones
YydF peptide
ABC-2 -type components without transporting function
Bacitracin
Cationic antimicrobial peptide (CAMP)
Cu2+-processing for N2O reductase
Cellar division involvment
Acetoin utilization
ABCB Subfamily
ABCC Subfamily
ABCD Subfamily
ABCG Subfamily
Macrolide exporters
Other putative ABC transporters
ABCB2
ABCB3
ABCB8
ABCB9
ABCB10
ABCB1
ABCB4
ABCB5
ABCB6
ABCB7
ATM
ABCB11
IrtA/B
MsbA
MdlA/B
Rv0194
IroC
HlyB
RaxB
CylB
AbcA
PatA/B
SteA/B
VcaM
EftA/B
ABCC1
ABCC2
ABCC3
ABCC4
ABCC5
ABCC6
ABCC10
ABCC11
ABCC12
ABCC13
ABCC7
ABCC8
ABCC9
LapB
HasD
PrsD
RsaD
EexD
ComA
BlpA
CydC/D
ABCD1
ABCD2
ABCD3
ABCD4
PXA1/2
ABCG1
ABCG2
ABCG4
ABCG3
ABCG5
ABCG8
PDR5
SNQ2
MacB
TylC
MsrA
VgaA
Lsa
YojI
PvdE
SyrD
YddA
AraP
AraQ
MsmX
BxlF
BxlG
?
ChvE
GguB
GguA
MlaC
MlaD
MlaE
MlaF
MlaB
GlcU
GlcT
GlcV
GtsB
GtsC
MalK
RbsB
RbsC
RbsA
RbsD
Auxiliary component
AraF
AraH
AraG
MglB
MglC
MglA
XylF
XylH
XylG
AlsB
AlsC
AlsA
FrcB
FrcC
FrcA
LsrB
LsrC
LsrD
LsrA
RhaS
RhaP
RhaQ
RhaT
EryG
EryF
EryE
XltC
XltB
XltA
IbpA
IatP
IatA
InoE
InoF
InoG
InoK
GlpV
GlpP
GlpQ
GlpS
GlpT
UgpB
UgpA
UgpE
UgpC
CysP
CysU
CysW
CysA
TupA
TupB
TupC
WtpA
WtpB
WtpC
NrtA
NrtB
NrtC
NrtD
CmpA
CmpB
CmpC
CmpD
TauA
TauC
TauB
SsuA
SsuC
SsuB
ThiY
ThiX
ThiZ
OphF
OphG
OphH
ModA
ModB
ModC
ModF
AfuA
AfuB
AfuC
TbpA
ThiP
ThiQ
PotD
PotC
PotB
PotA
PotF
PotI
PotH
PotG
AttC
AttB
AttA2
AttA1
PhnS
PhnV
PhnU
PhnT
ProX
ProW
ProV
OpuBC
OpuBB
OpuBA
MalE
MalF
MalG
MalK
GanO
GanP
GanQ
MsmX
MsmE
MsmF
MsmG
MsmK
LacE
LacF
LacG
LacK
SmoE
SmoF
SmoG
SmoK
AglE
AglF
AglG
AglK
TogB
TogM
TogN
TogA
AguE
AguF
AguG
?
LplA
LplB
LplC
?
TreE
TreT
TreU
TreV
TreS
NgcE
NgcF
NgcG
?
CebE
CebF
CebG
MsiK
DasA
DasB
DasC
MsiK
ChiE
ChiF
ChiG
?
PstS
PstC
PstA
PstB
PhnD
PhnE
PhnC
ArgT
HisM
HisQ
HisP
HisJ
HisM
HisQ
HisP
GlnH
GlnP
GlnQ
ArtJ
ArtI
ArtM
ArtQ
ArtP
GltI
GltK
GltJ
GltL
OccT
OccM
OccQ
OccP
AapJ
AapQ
AapM
AapP
GluB
GluC
GluD
GluA
FliY
YecS
YecC
TcyJ
TcyK
TcyL
TcyM
TcyN
AotJ
AotM
AotQ
AotP
BgtB
BgtA
LysX
LysY
LivK
LivH
LivM
LivG
LivF
NatB
NatC
NatD
NatA
NatE
UrtA
UrtB
UrtC
UrtD
UrtE
MetQ
MetI
MetN
YxeM
YxeN
YxeO
OppA
OppB
OppC
OppD
OppF
DppA
DppB
DppC
DppD
DppF
DppE
SapA
SapB
SapC
SapD
SapF
NikA
NikB
NikC
NikD
NikE
GsiB
GsiC
GsiD
GsiA
YejA
YejB
YejE
YejF
FhuD
FhuB
FhuC
BtuF
BtuC
BtuD
MntC
MntB
MntA
ZnuA
ZnuB
ZnuC
MtsA
MtsC
MtsB
SitA
SitC
SitD
SitB
PsaA
PsaC
PsaB
TroA
TroC
TroD
TroB
CbiN
CbiM
CbiQ
CbiO
CbiN/L
CbiK
BioY
BioN
BioM
EcfA1
EcfT
EcfA2
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CylA
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KpsM
KpsT
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RfbB
TagG
TagH
NodJ
NodI
NatB
NatA
HrtB
HrtA
OleC5
OleC4
BcrB
BcrA
BceB
BceA
NukE
NukG
NukF
NisE
NisG
NisF
LolC
LolE
LolD
CcmD
CcmC
CcmB
CcmA
LptF
LptG
LptB
Rv2686c
Rv2687c
Rv2688c
YydJ
YydI
BraE
BraD
VraG
VraF
NosY
NosF
FtsX
FtsE
YtrF
YtrC/D
YtrB
YtrE
Glucose / Arabinose
Glucose / Mannose
Ribose / Autoinducer 2 / D-Xylose
L-Arabinose
Methyl-galactoside
D-Xylose
D-Allose
Fructose
Autoinducer 2
Rhamnose
Erythritol
Xylitol
myo-Inositol
myo-Inositol 1-phosphate
Glycerol
sn-Glycerol 3-phosphate
Auxiliary component
Phosphate
Phosphonate
Lysine / Arginine / Ornithine
Histidine
Glutamine
Glutamine?
Arginine
Glutamate / Aspartate
Octopine / Nopaline
General L-Amino acid
Glutamate
Cystine
Cystine
Arginine / Ornithine
Arginine / Lysine / Histidine / Glutamine
Lysine
Branched-chain amino acid
Neutral amino acid / Histidine
Urea
D-Methionine
Amino acid
Oligopeptide
Dipeptide / Heme / δ-Aminolevulinic acid
Dipeptide
Cationic peptide
Nickel
Glutathione
Microcin C
Iron complex
Vitamin B12?
Manganese
Zinc
Iron (II, III) / Copper / Manganese / Zinc
Iron (II) / Manganese
Manganese / Zinc
Zinc / Manganese / Iron (II)
Cobalt
Nickel
Biotin
Biotin
Hemolysin
Capsular polysaccharide
Lipopolysaccharide
Teichoic acid
Lipo-oligosaccharide
Na+
Hemine
Oleandomycin
Bacitracin
Bacitracin
Lantibiotics
Lantibiotics
Lipoprotein
Heme
Lipopolysaccharide
Fluoroquinolones
YydF peptide
Bacitracin
Cationic antimicrobial peptide (CAMP)
Cu2+-processing for N2O reductase
Cellar division involvment
Acetoin utilization
-5.88
-7.11
-2.14
-5.76
-2.03
-7.63
-1.46
2.97
0.77
0.66
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0.58
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2.78
3.19
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0.49
-1.01
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0.19
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-2.53
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-9.63
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