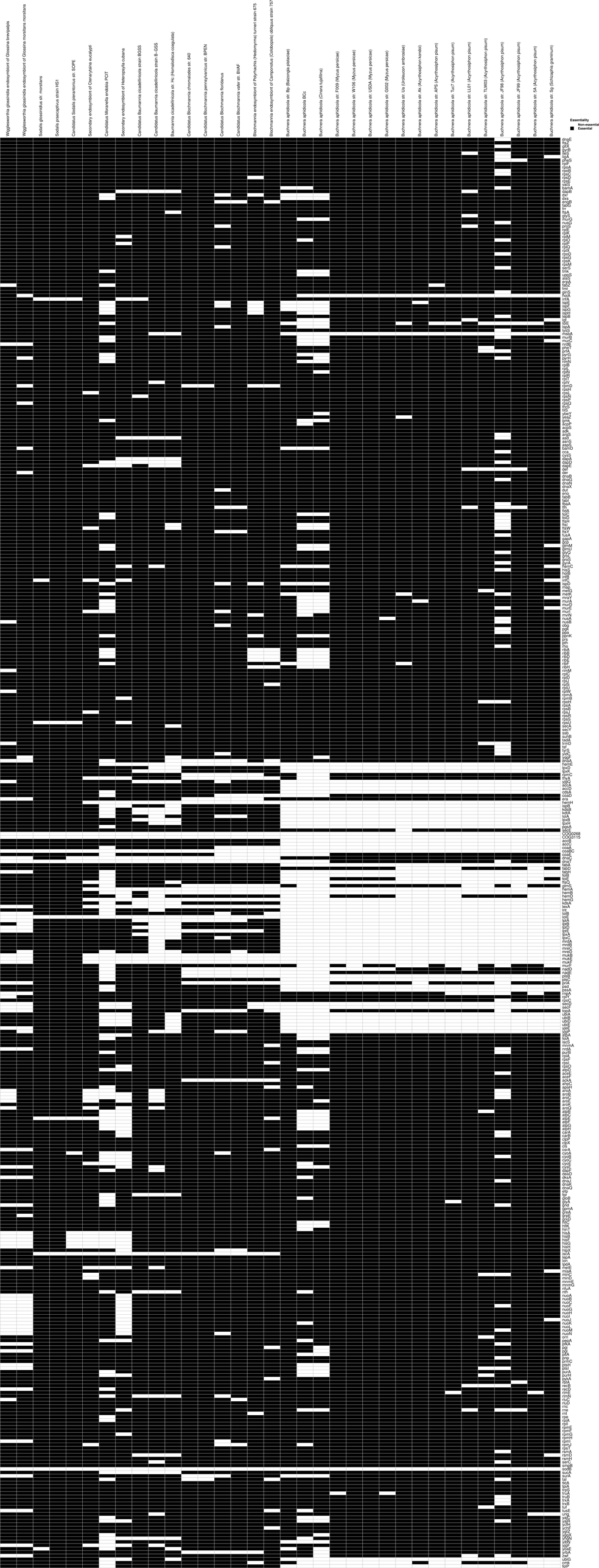
Wigglesworthia glossinidia endosymbiont of Glossina brevipalpis
Wigglesworthia glossinidia endosymbiont of Glossina morsitans morsitans
Sodalis glossinidius str. morsitans
Sodalis pierantonius str. SOPE
Candidatus Sodalis pierantonius str. HS1
Secondary endosymbiont of Cinnarytaenia eucalypti
Candidatus Moranella endobia PCIT
Secondary endosymbiont of Heteropsylla cubana
Candidatus Baumannia cicadellinicola strain BGSS
Candidatus Baumannia cicadellinicola strain B-GSS
Baumannia cicadellinicola str. Hc (Homalodisca coagulata)
Candidatus Blochmannia chromaticus str. 840
Candidatus Blochmannia pennsylvanicus str. BPEN
Candidatus Blochmannia floridanus
Candidatus Blochmannia vafer str. BVAF
Blochmannia endosymbiont of Polyrhachis (Hedomyrma) turneri strain 675
Blochmannia endosymbiont of Camponotus (Colobopsis) obliquus strain 757
Buchnera aphidicola str. Bp (Baizongia pistaciae)
Buchnera aphidicola BCc
Buchnera aphidicola (Cinara tujafilina)
Buchnera aphidicola str. F009 (Myzus persicae)
Buchnera aphidicola str. W106 (Myzus persicae)
Buchnera aphidicola str. USDA (Myzus persicae)
Buchnera aphidicola str. G002 (Myzus persicae)
Buchnera aphidicola str. Ua (Uroleucon ambrosiae)
Buchnera aphidicola str. Ak (Acyrthosiphon kondoi)
Buchnera aphidicola str. APS (Acyrthosiphon pisum)
Buchnera aphidicola str. Tuc7 (Acyrthosiphon pisum)
Buchnera aphidicola str. LL01 (Acyrthosiphon pisum)
Buchnera aphidicola str. TLW03 (Acyrthosiphon pisum)
Buchnera aphidicola str. JF98 (Acyrthosiphon pisum)
Buchnera aphidicola str. JF99 (Acyrthosiphon pisum)
Buchnera aphidicola str. 5A (Acyrthosiphon pisum)
Buchnera aphidicola str. Sg (Schizaphis graminum)
Essentiality
Non-essential
Essential
dnaE
hslV
gltX
ftsB
hflB
rplA
chpS
rplF
rpoA
rpsE
rplO
rpsD
rpsS
rplE
rplX
rplN
rplC
rplD
rplW
rplB
rpsJ
rplV
rpsC
rplP
rpmC
rpsQ
rplR
rplF
rplM
rpsI
rplQ
rpsL
rpoC
rpoB
rpsG
rpsA
rpsB
tmk
ppiB
alaS
trpA
trpB
trmE
gltS
lipA
lipB
hslU
hslV
mdaA
murB
mviN
ftsQ
ftsA
ftsZ
lpxC
rsgA
ispH
lepB
ispE
ftsE
lipA
lipB
yhbG
mdaA
murB
mviN
ftsQ
prfA
prfB
dxrA
dxrB
rplS
rplT
rplU
rplY
rpmD
rpsR
rpsK
rpsM
rpsD
rpsG
thiC
ybeY
prmC
tgt
ftsK
acpS
aroB
argB
argD
asnS
aspS
bamD
ccs
dsbA
dsbB
dsbD
dsbG
def
dnaB
dnaG
dnaN
dnaX
ent
ent
tabB
tabC
fbaA
fdx
fldA
fldB
fldD
fldH
fldX
fldW
fldY
luxS
gapA
gltA
gltB
gltD
gltX
glyQ
glyS
glyA
hemC
hemD
hemB
hemL
hemA
hemE
hemH
hemN
hemZ
hisB
hisD
hisG
hisH
hisA
hisF
hisI
hisC
hisS
hscB
hscA
iscS
iscU
iscA
hscB
hscA
fdx
iscR
lon
mdaB
mqo
msbA
murA
murB
murC
murD
murE
murF
mviN
mraY
nusB
nusA
ogt
pgk
pta
gpmA
prs
ptsH
ptsI
rho
rbfA
rbfB
rbfC
rbgA
rimM
rplI
rplJ
rplL
rplK
rplU
rplY
rpmA
rpmB
rpmG
rpsA
rpsB
rpsI
rpsJ
rpsK
rpsM
secA
secY
secE
secG
serB
serC
serA
tadA
tatB
tatC
tgt
trmD
tuf
tyrS
ubiB
ubiD
ubiE
ubiG
ubiH
ubiF
ubiA
uppS
yaeL
yaeT
COG0268
COG3115
accB
accC
accA
coaBC
coaD
dnaG
dnaX
fabD
fabH
fabB
fabG
fabI
fabF
fabZ
fldA
fldB
folA
folB
folK
folP
folE
gpsA
glnS
glmS
glmU
gmk
hemA
hemB
hemD
hemC
hemE
hemF
hemG
hemH
lipA
lipB
lipD
lipE
lipK
lipC
mreB
mreC
mreD
mukB
mukE
mukF
murI
murG
nadD
nagE
nagB
pgsA
prfA
psd
pssA
rplX
rplN
secD
secF
sgcA
ubiA
ubiD
ubiE
ybiB
ybiP
ybiA
iscS
mnmA
mnmG
rplA
rplF
rplS
rbsC
acnB
acnA
ahpC
ahpF
aroA
aroB
aroC
aroD
aroE
aroG
aroK
aroQ
asnS
aspC
aspS
aspA
cdsA
carA
carB
cspE
cbiA
cbiB
cysA
cysD
cysG
cysE
dapB
dsbD
dksA
dnaB
dnaG
dnaQ
ftsI
ftsY
glnB
glyA
gltA
gpmA
gnsA
grpE
grxD
hfq
hflX
hisB
hisD
hisG
hisH
hisA
hisF
hscC
hscA
lgt
lexA
lipB
mreB
miaA
mnmE
mnmG
mnmC
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rlmN
rnt
rnb
nuoB
nuoC
nuoD
nuoH
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nuoK
nuoL
nuoM
nuoN
pnp
pepA
pfkA
pgi
pgk
pta
prs
ptsG
ptsH
ptsI
purA
purK
purB
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recB
recJ
rimM
rluC
ruvB
rnc
rnt
rpe
rplA
rplF
rpmE
rpmG
rpmH
rpmI
rpmJ
rpsT
rsmA
rsmB
rsmH
serS
sodB
sucA
sucB
tatA
tat
tktA
tktB
trpS
trpA
trpB
trpE
tuaE
uvrB
vacB
yajC
yaeT
ydiF
yfiO
yfgN
yhbN
yfgF
yfgE
ybaK
ybiA
ybiT
ybiX
zipA
zwf