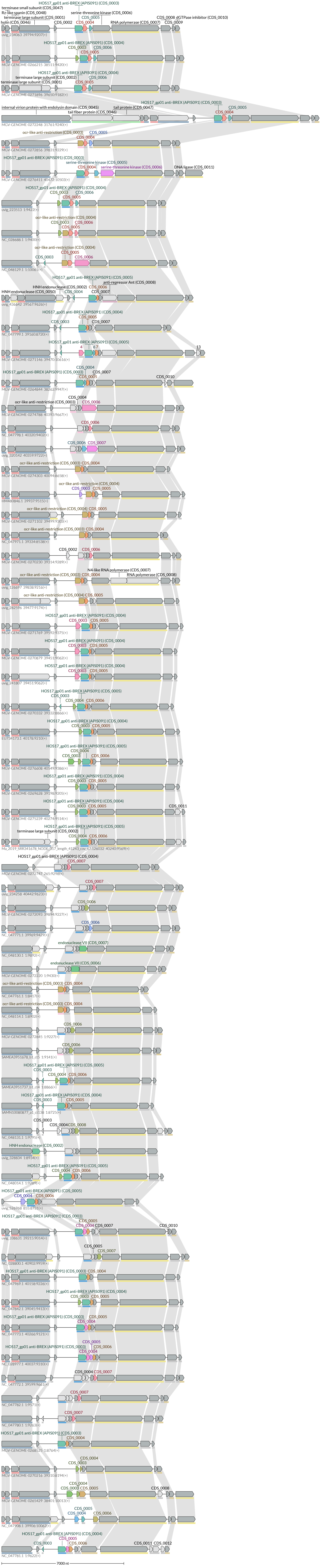
HOS17_gp01 anti-BREX (APIS091) (CDS_0003)
terminase small subunit (CDS_0047)
Rz-like spanin (CDS_0048)
terminase large subunit (CDS_0001)
holin (CDS_0046)
CDS_0002
serine-threonine kinase (CDS_0006)
CDS_0005
CDS_0004
RNA polymerase (CDS_0007)
CDS_0008 dGTPase inhibitor (CDS_0010)
CDS_0009
uvig_234063 39794:9207(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0004)
CDS_0003
CDS_0006
CDS_0005
MGV-GENOME-0266215 38511:9420(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0004)
terminase large subunit (CDS_0002)
CDS_0006
terminase large subunit (CDS_0001)
CDS_0005
MGV-GENOME-0271896 39650:9182(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0003)
internal virion protein with endolysin domain (CDS_0045)
tail protein (CDS_0047)
CDS_0005
tail fiber protein (CDS_0046)
CDS_0004
MGV-GENOME-0272248 31761:9240(+)
ocr-like anti-restriction (CDS_0003)
CDS_0005
CDS_0004
MGV-GENOME-0272856 39831:9229(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0003)
serine-threonine kinase (CDS_0005)
CDS_0004
serine-threonine kinase (CDS_0006)
DNA ligase (CDS_0011)
MGV-GENOME-0276411 40472:10503(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0004)
CDS_0003
CDS_0006
CDS_0005
uvig_223513 1:9422(+)
ocr-like anti-restriction (CDS_0004)
CDS_0003
CDS_0006
CDS_0005
NC_028688.1 1:9400(+)
ocr-like anti-restriction (CDS_0004)
CDS_0005
CDS_0003
CDS_0006
NC_048129.1 1:10061(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0005)
anti-repressor Ant (CDS_0008)
HNH endonuclease (CDS_0002)
CDS_0006
HNH endonuclease (CDS_0050)
CDS_0004
CDS_0007
uvig_436642 39567:9626(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0004)
CDS_0005
CDS_0003
CDS_0007
NC_047799.1 39160:8720(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0005)
3
4
6 7
13
MGV-GENOME-0271146 39470:10616(+)
CDS_0004
HOS17_gp01 anti-BREX (APIS091) (CDS_0003)
CDS_0007
CDS_0005
CDS_0010
MGV-GENOME-0264844 38262:9947(+)
CDS_0004
ocr-like anti-restriction (CDS_0003)
CDS_0006
MGV-GENOME-0274788 40393:9667(+)
CDS_0006
NC_047798.1 40320:9402(+)
CDS_0006
CDS_0007
uvig_320142 40359:9722(+)
ocr-like anti-restriction (CDS_0003)
CDS_0004
MGV-GENOME-0274303 40094:8658(+)
ocr-like anti-restriction (CDS_0004)
CDS_0003
CDS_0005
HM480846.1 39937:9515(+)
ocr-like anti-restriction (CDS_0004)
CDS_0005
MGV-GENOME-0271102 39499:9303(+)
ocr-like anti-restriction (CDS_0003)
CDS_0004
NC_047971.1 39334:8538(+)
CDS_0002
CDS_0006
MGV-GENOME-0270230 39314:9289(+)
N4-like RNA polymerase (CDS_0007)
ocr-like anti-restriction (CDS_0003)
CDS_0004
RNA polymerase (CDS_0008)
uvig_126697 39838:9216(+)
ocr-like anti-restriction (CDS_0004)
CDS_0005
uvig_282596 39477:9174(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0004)
CDS_0003
CDS_0005
MGV-GENOME-0271769 39592:9375(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0004)
CDS_0003
CDS_0005
MGV-GENOME-0270879 39451:9062(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0004)
CDS_0003
CDS_0005
uvig_241807 39451:9062(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0005)
CDS_0003
CDS_0004
CDS_0006
MGV-GENOME-0270332 39332:8866(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0004)
CDS_0003
CDS_0005
EU734173.1 40178:9210(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0005)
CDS_0004
CDS_0003
CDS_0006
MGV-GENOME-0276608 40549:9386(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0004)
CDS_0003
CDS_0005
MGV-GENOME-0269628 39198:9205(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0004)
CDS_0003
CDS_0005
CDS_0011
MGV-GENOME-0275239 40274:9514(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0005)
terminase large subunit (CDS_0002)
CDS_0004
CDS_0006
Ma_2019_SRR341678_NODE_317_length_41243_cov_67.126032 40240:9569(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0004)
CDS_0007
MGV-GENOME-0272747 265:9298(+)
CDS_0007
uvig_234258 40442:9623(+)
CDS_0006
MGV-GENOME-0272093 39894:9227(+)
CDS_0006
NC_047771.1 39969:9429(+)
endonuclease VII (CDS_0007)
NC_048130.1 1:9892(+)
endonuclease VII (CDS_0006)
MGV-GENOME-0272220 1:9430(+)
ocr-like anti-restriction (CDS_0003)
CDS_0004
NC_047761.1 1:8417(+)
ocr-like anti-restriction (CDS_0003)
CDS_0004
NC_048114.1 1:8902(+)
CDS_0006
MGV-GENOME-0272845 1:9227(+)
CDS_0006
SAMEA3951678_b1_ct5 1:9141(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0005)
CDS_0003
CDS_0004
CDS_0006
SAMEA3951737_b1_ct4 1:8866(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0004)
CDS_0003
CDS_0005
SAMN10080877_a1_ct138 1:8725(+)
CDS_0003
CDS_0004CDS_0008
NC_048131.1 1:9795(+)
HNH endonuclease (CDS_0002)
uvig_328834 1:8934(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0005)
CDS_0004
CDS_0006
NC_048014.1 1:9289(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0005)
CDS_0004
CDS_0006
uvig_526968 855:8731(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0003)
CDS_0005
CDS_0004
CDS_0007
CDS_0010
uvig_338631 39215:9014(+)
CDS_0005
CDS_0007
NC_028800.1 40902:9959(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0003)
CDS_0004
NC_047969.1 40158:9226(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0004)
CDS_0003
CDS_0005
NC_047842.1 39045:9413(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0003)
CDS_0005
CDS_0004
NC_047773.1 40266:9121(+)
CDS_0005
HOS17_gp01 anti-BREX (APIS091) (CDS_0003)
CDS_0006
CDS_0004
NC_028977.1 40037:9310(+)
CDS_0004
CDS_0007
NC_047772.1 39599:9661(+)
CDS_0007
NC_047782.1 1:9571(+)
CDS_0007
NC_047780.1 1:9263(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0003)
CDS_0004
MGV-GENOME-0268525 1:8764(+)
CDS_0004
CDS_0003
MGV-GENOME-0270216 39310:8194(+)
CDS_0004
CDS_0003
CDS_0005
CDS_0008
MGV-GENOME-0265429 38401:10013(+)
CDS_0005
CDS_0004
CDS_0006
NC_047908.1 39906:10062(+)
HOS17_gp01 anti-BREX (APIS091) (CDS_0004)
CDS_0005
CDS_0003
CDS_0006
CDS_0011
CDS_0012
NC_047781.1 1:9622(+)
7000 nt
DNA, RNA and nucleotide metabolism
head and packaging
lysis
moron, auxiliary metabolic gene and host takeover
other
tail
transcription regulation
unknown function
Anti-defence