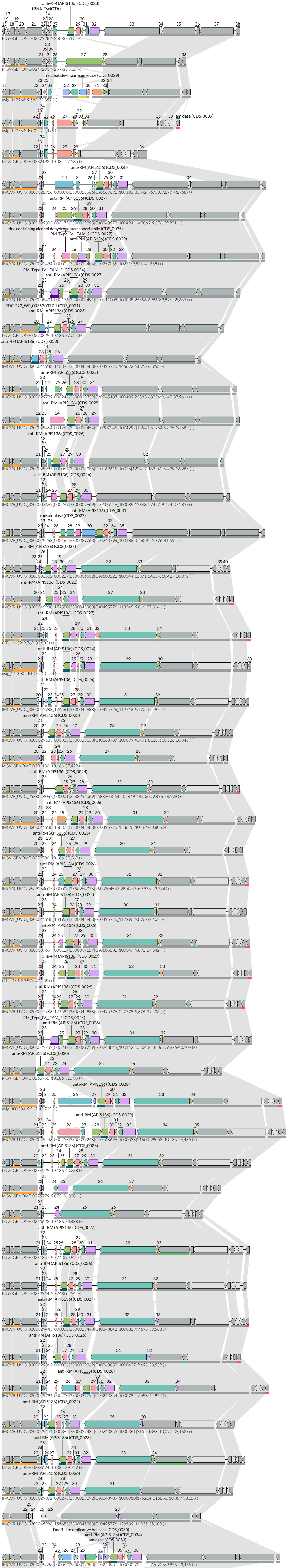
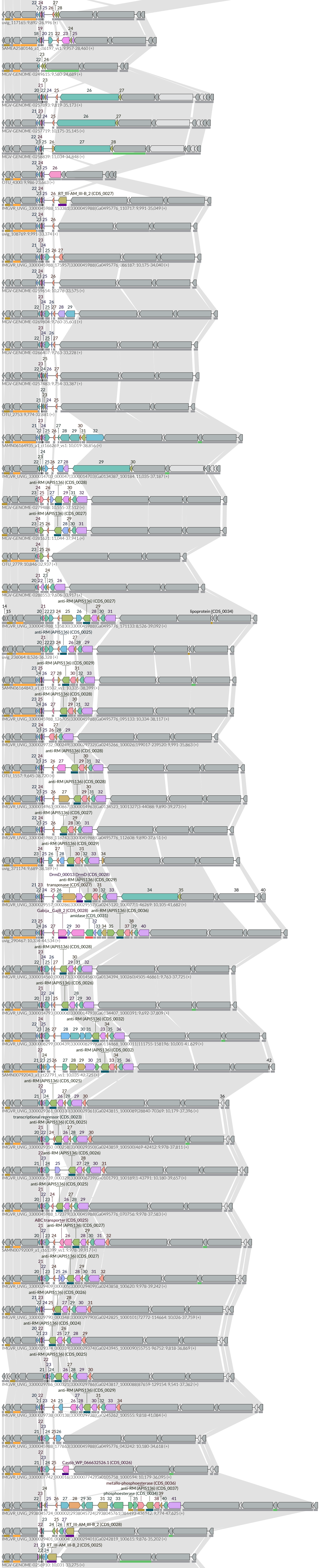
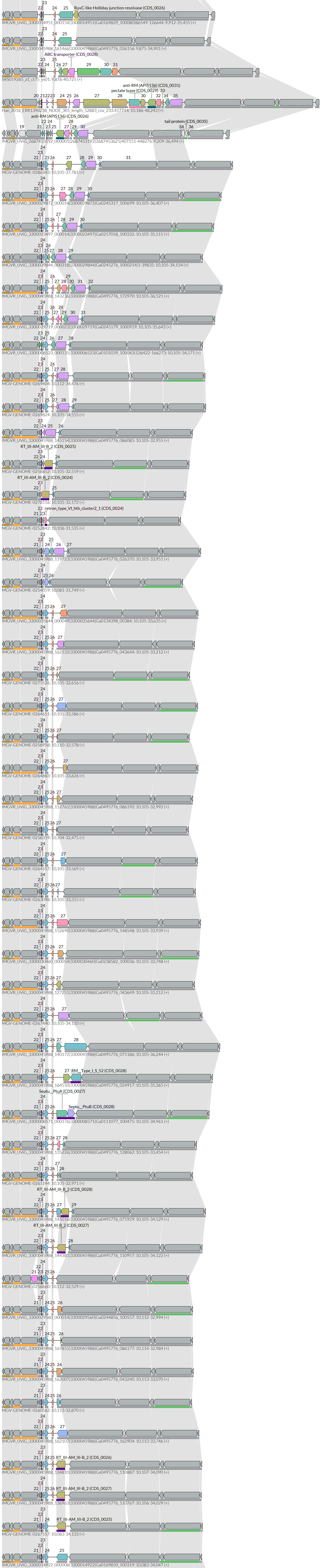
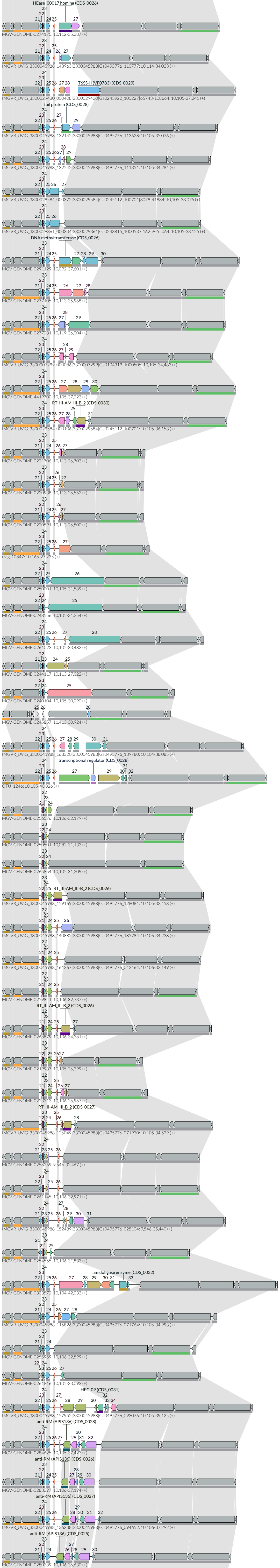
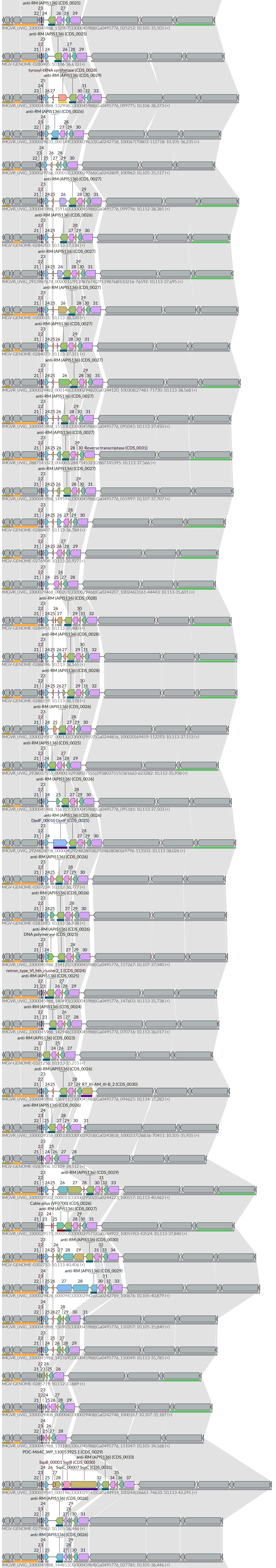
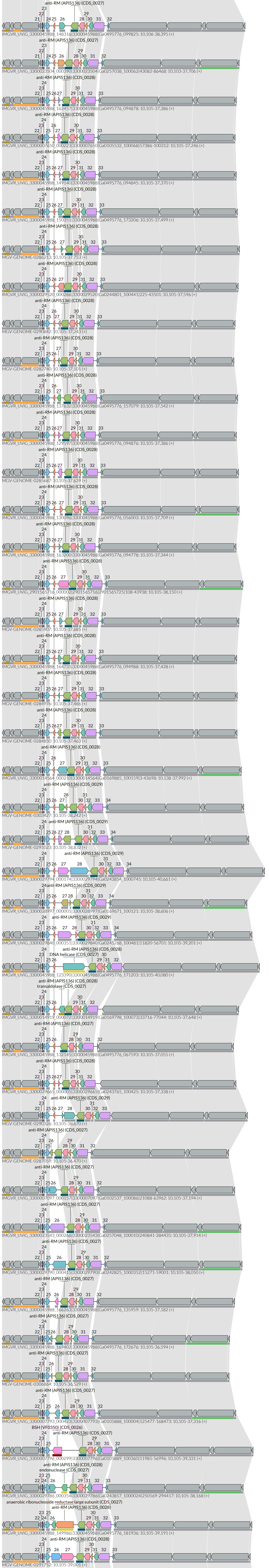

anti-RM (APIS136) (CDS_0028)
tRNA-Tyr(GTA)
MGV-GENOME-0282928: 9,258-37,988 (+)
MGV-GENOME-0244201: 9,257-31,502 (+)
nucleotide-sugar epimerase (CDS_0029)
uvig_112966: 9,580-32,357 (+)
amidase (CDS_0039)
uvig_120564: 10,034-31,495 (+)
MGV-GENOME-0232198: 10,034-27,535 (+)
anti-RM (APIS136) (CDS_0028)
IMGVR_UViG_3300028966_000070|3300028966|Ga0169696_100102|30342-76750: 9,877-41,768 (+)
anti-RM (APIS136) (CDS_0027)
IMGVR_UViG_3300029395_000179|3300029395|Ga0243972_100424|1-43862: 9,876-39,221 (+)
zinc containing alcohol dehydrogenase superfamily (CDS_0025)
RM_Type_IV__FAM_2 (CDS_0027)
anti-RM (APIS136) (CDS_0029)
IMGVR_UViG_3300023484_000027|3300023484|Ga0257055_10231: 9,876-41,658 (+)
RM_Type_IV__FAM_2 (CDS_0024)
anti-RM (APIS136) (CDS_0027)
IMGVR_UViG_3300008491_000176|3300008491|Ga0111008_100038|26556-69863: 9,876-38,667 (+)
PDC-S22_WP_003530377.1 (CDS_0021)
anti-RM (APIS136) (CDS_0023)
MGV-GENOME-0293329: 10,186-37,024 (+)
anti-RM (APIS136) (CDS_0022)
IMGVR_UViG_3300045988_140395|3300045988|Ga0495776_146672: 9,875-33,953 (+)
anti-RM (APIS136) (CDS_0027)
IMGVR_UViG_3300029739_000242|3300029739|Ga0245187_100409|26333-68926: 9,642-37,961 (+)
anti-RM (APIS136) (CDS_0025)
IMGVR_UViG_3300028454_001263|3300028454|Ga0307245_1074292|18540-61954: 9,875-38,589 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300028985_000067|3300028985|Ga0169615_10025|122417-163342: 9,429-36,285 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300007669_000289|3300007669|Ga0105546_100089|15348-57457: 9,774-37,285 (+)
anti-RM (APIS136) (CDS_0031)
transaldolase (CDS_0027)
IMGVR_UViG_3300029763_000165|3300029763|Ga0243796_100188|3-46295: 9,876-41,652 (+)
anti-RM (APIS136) (CDS_0027)
IMGVR_UViG_3300006502_000287|3300006502|Ga0100528_100344|13371-54354: 10,487-38,072 (+)
anti-RM (APIS136) (CDS_0022)
IMGVR_UViG_3300045988_172550|3300045988|Ga0495776_113545: 9,818-37,804 (+)
anti-RM (APIS136) (CDS_0027)
OTU_1652: 9,769-39,803 (+)
anti-RM (APIS136) (CDS_0024)
uvig_540080: 10,075-40,154 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300045988_174561|3300045988|Ga0495776_112718: 9,770-39,597 (+)
anti-RM (APIS136) (CDS_0023)
IMGVR_UViG_3300029133_000325|3300029133|Ga0168787_10009|40401-81367: 10,186-38,048 (+)
MGV-GENOME-0301130: 10,186-37,429 (+)
anti-RM (APIS136) (CDS_0024)
IMGVR_UViG_2588254069_000001|2588254069|2588303264|407849-449366: 9,876-38,599 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300045988_158876|3300045988|Ga0495776_158626: 10,186-40,805 (+)
anti-RM (APIS136) (CDS_0025)
MGV-GENOME-0279780: 10,186-39,269 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_2588254075_000008|2588254075|2588304567|28-42670: 9,876-39,724 (+)
anti-RM (APIS136) (CDS_0025)
IMGVR_UViG_3300045988_151969|3300045988|Ga0495776_112296: 9,876-39,402 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300007657_000187|3300007657|Ga0105536_100347: 9,876-39,842 (+)
anti-RM (APIS136) (CDS_0027)
OTU_1610: 9,876-40,038 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300045988_127584|3300045988|Ga0495776_027778: 9,876-39,206 (+)
RM_Type_IV__FAM_2 (CDS_0024)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300029759_000242|3300029759|Ga0243843_100142|103040-146067: 9,876-40,109 (+)
anti-RM (APIS136) (CDS_0020)
MGV-GENOME-0266755: 10,186-36,735 (+)
anti-RM (APIS136) (CDS_0028)
uvig_108334: 9,912-43,739 (+)
anti-RM (APIS136) (CDS_0029)
IMGVR_UViG_3300029248_000253|3300029248|Ga0168696_1000038|51600-99003: 10,186-44,478 (+)
anti-RM (APIS136) (CDS_0026)
MGV-GENOME-0284929: 10,186-40,238 (+)
MGV-GENOME-0275779: 9,875-36,308 (+)
MGV-GENOME-0275622: 10,186-34,438 (+)
anti-RM (APIS136) (CDS_0027)
MGV-GENOME-0281857: 9,774-39,692 (+)
anti-RM (APIS136) (CDS_0026)
MGV-GENOME-0279914: 9,774-39,294 (+)
anti-RM (APIS136) (CDS_0027)
IMGVR_UViG_3300029443_000243|3300029443|Ga0243848_1000869: 9,698-39,563 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300029362_000008|3300029362|Ga0243852_1000437: 9,698-38,532 (+)
anti-RM (APIS136) (CDS_0028)
IMGVR_UViG_3300029794_000200|3300029794|Ga0243854_1000784: 9,698-41,974 (+)
anti-RM (APIS136) (CDS_0024)
IMGVR_UViG_3300029434_000362|3300029434|Ga0243855_1000361|315-41393: 10,097-38,168 (+)
anti-RM (APIS136) (CDS_0028)
MGV-GENOME-0284624: 10,334-39,722 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300029392_000295|3300029392|Ga0243989_1000010|175214-216856: 10,359-38,255 (+)
IMGVR_UViG_3300045988_159653|3300045988|Ga0495776_128589: 11,035-35,003 (+)
DnaB-like replicative helicase (CDS_0030)
anti-RM (APIS136) (CDS_0034)
amidase (CDS_0033)
IMGVR_UViG_3300029383_000067|3300029383|Ga0243931_1000027|22141-70236: 9,876-43,455 (+)


uvig_117165: 9,892-26,996 (+)
SAMEA2580146_a1_ct6197_vs1: 9,957-28,460 (+)
MGV-GENOME-0249615: 9,580-24,689 (+)
MGV-GENOME-0257893: 9,819-35,173 (+)
MGV-GENOME-0257719: 10,175-35,145 (+)
MGV-GENOME-0258839: 11,034-34,848 (+)
OTU_4300: 9,986-23,663 (+)
RT_III-AM_III-B_2 (CDS_0027)
IMGVR_UViG_3300045988_153381|3300045988|Ga0495776_110717: 9,991-35,049 (+)
uvig_108769: 9,991-33,374 (+)
IMGVR_UViG_3300045988_175957|3300045988|Ga0495776_086187: 10,175-34,040 (+)
MGV-GENOME-0259654: 10,278-33,575 (+)
MGV-GENOME-0269804: 9,760-35,601 (+)
MGV-GENOME-0266407: 9,763-33,228 (+)
MGV-GENOME-0257483: 9,754-33,387 (+)
OTU_2753: 9,774-32,881 (+)
SAMN06164935_a1_ct166269_vs1: 10,019-38,856 (+)
IMGVR_UViG_3300014703_000047|3300014703|Ga0134387_100184: 11,035-37,187 (+)
anti-RM (APIS136) (CDS_0028)
MGV-GENOME-0279488: 10,555-37,512 (+)
anti-RM (APIS136) (CDS_0027)
MGV-GENOME-0281621: 11,044-37,941 (+)
OTU_2779: 10,846-32,937 (+)
MGV-GENOME-0288553: 9,606-33,917 (+)
anti-RM (APIS136) (CDS_0027)
lipoprotein (CDS_0034)
IMGVR_UViG_3300045988_135830|3300045988|Ga0495776_171133: 8,526-39,092 (+)
anti-RM (APIS136) (CDS_0025)
uvig_236064: 8,526-36,328 (+)
anti-RM (APIS136) (CDS_0029)
SAMN06164843_a1_ct15502_vs1: 10,335-38,399 (+)
anti-RM (APIS136) (CDS_0028)
IMGVR_UViG_3300045988_126705|3300045988|Ga0495776_095133: 10,334-38,117 (+)
IMGVR_UViG_3300029732_000249|3300029732|Ga0245266_100026|199017-239520: 9,991-35,863 (+)
anti-RM (APIS136) (CDS_0028)
OTU_1557: 9,645-38,720 (+)
anti-RM (APIS136) (CDS_0028)
IMGVR_UViG_3300014963_000867|3300014963|Ga0134523_1001327|3-44088: 9,890-39,273 (+)
anti-RM (APIS136) (CDS_0027)
IMGVR_UViG_3300045988_118743|3300045988|Ga0495776_112608: 9,890-37,651 (+)
anti-RM (APIS136) (CDS_0029)
uvig_371174: 9,689-38,189 (+)
DrmD_00013 DrmD (CDS_0028)
anti-RM (APIS136) (CDS_0029)
transposase (CDS_0027)
IMGVR_UViG_3300029557_000286|3300029557|Ga0245120_100077|1-46269: 10,105-41,682 (+)
Gabija__GajB_2 (CDS_0028)
anti-RM (APIS136) (CDS_0036)
amidase (CDS_0031)
uvig_290467: 10,334-44,534 (+)
anti-RM (APIS136) (CDS_0028)
IMGVR_UViG_3300014560_000173|3300014560|Ga0134394_100260|4505-46861: 9,763-37,725 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300014793_000006|3300014793|Ga0134407_1000391: 9,692-37,809 (+)
anti-RM (APIS136) (CDS_0032)
IMGVR_UViG_3300008299_000439|3300008299|Ga0114868_1000011|111755-158196: 10,001-41,629 (+)
anti-RM (APIS136) (CDS_0032)
SAMN00792043_a1_ct22791_vs1: 10,035-42,725 (+)
anti-RM (APIS136) (CDS_0025)
IMGVR_UViG_3300029361_000330|3300029361|Ga0243815_1000089|28840-70369: 10,179-37,396 (+)
transcriptional repressor (CDS_0023)
anti-RM (APIS136) (CDS_0025)
IMGVR_UViG_3300029350_000258|3300029350|Ga0243859_100500|469-42412: 9,978-37,811 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300006739_000329|3300006739|Ga0101793_100189|1-43791: 10,180-39,657 (+)
anti-RM (APIS136) (CDS_0025)
IMGVR_UViG_3300045988_172379|3300045988|Ga0495776_070756: 9,978-37,583 (+)
ABC transporter (CDS_0025)
anti-RM (APIS136) (CDS_0027)
SAMN00792009_a1_ct61399_vs1: 9,978-39,917 (+)
anti-RM (APIS136) (CDS_0027)
IMGVR_UViG_3300029409_000005|3300029409|Ga0243858_100620: 9,978-39,242 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300029790_000348|3300029790|Ga0242825_1000101|72772-114664: 10,026-37,759 (+)
anti-RM (APIS136) (CDS_0024)
IMGVR_UViG_3300029374_000339|3300029374|Ga0243945_1000090|55751-96752: 9,818-36,869 (+)
anti-RM (APIS136) (CDS_0025)
IMGVR_UViG_3300029786_000321|3300029786|Ga0243817_1000088|87659-129154: 9,541-37,362 (+)
anti-RM (APIS136) (CDS_0029)
IMGVR_UViG_3300029738_000138|3300029738|Ga0245262_100555: 9,818-41,084 (+)
IMGVR_UViG_3300045988_177863|3300045988|Ga0495776_043242: 10,180-34,618 (+)
Cas6b_WP_066632526.1 (CDS_0026)
IMGVR_UViG_3300007742_000016|3300007742|Ga0105758_1000594: 10,179-36,095 (+)
metallo-phosphoesterase (CDS_0036)
anti-RM (APIS136) (CDS_0037)
phosphoesterase (CDS_0034)
IMGVR_UViG_2938045724_000002|2938045724|2938045761|384493-436942: 9,774-47,625 (+)
RT_III-AM_III-B_2 (CDS_0028)
IMGVR_UViG_3300029401_000004|3300029401|Ga0242819_100615: 9,876-35,202 (+)
RT_III-AM_III-B_2 (CDS_0025)
MGV-GENOME-0256910: 10,031-33,275 (+)


RuvC-like Holliday junction resolvase (CDS_0026)
IMGVR_UViG_3300014951_000154|3300014951|Ga0169829_100080|86549-126644: 9,912-35,455 (+)
IMGVR_UViG_3300045988_161466|3300045988|Ga0495776_026156: 9,875-34,901 (+)
ABC transporter (CDS_0028)
SRS019285_a1_ct75_vs01: 9,876-40,725 (+)
anti-RM (APIS136) (CDS_0031)
pectate lyase (CDS_0029)
Han_2018_ERR1398238_NODE_305_length_52883_cov_233.417714: 10,186-48,243 (+)
anti-RM (APIS136) (CDS_0026)
tail protein (CDS_0035)
IMGVR_UViG_2687453192_000001|2687453192|2687453625|407151-448276: 9,209-36,494 (+)
MGV-GENOME-0286343: 10,105-37,781 (+)
IMGVR_UViG_3300029872_000014|3300029872|Ga0245317_100699: 10,105-36,407 (+)
IMGVR_UViG_3300023497_000014|3300023497|Ga0257058_100332: 10,105-35,515 (+)
IMGVR_UViG_3300029844_000318|3300029844|Ga0245276_1000214|1-39835: 10,105-34,154 (+)
IMGVR_UViG_3300045988_143236|3300045988|Ga0495776_172970: 10,105-36,521 (+)
IMGVR_UViG_3300029719_000023|3300029719|Ga0245179_1000919: 10,105-35,643 (+)
IMGVR_UViG_3300006523_000135|3300006523|Ga0101039_100043|126422-166273: 10,105-34,171 (+)
MGV-GENOME-0269404: 10,112-34,476 (+)
MGV-GENOME-0269824: 10,105-34,555 (+)
IMGVR_UViG_3300045988_145154|3300045988|Ga0495776_086085: 10,105-32,955 (+)
RT_III-AM_III-B_2 (CDS_0025)
MGV-GENOME-0258852: 10,105-32,559 (+)
RT_III-AM_III-B_2 (CDS_0024)
MGV-GENOME-0278116: 10,105-32,172 (+)
retron_type_VI_hth_cluster2_1 (CDS_0024)
MGV-GENOME-0252842: 10,106-31,535 (+)
IMGVR_UViG_3300045988_119723|3300045988|Ga0495776_026370: 10,105-33,951 (+)
MGV-GENOME-0254059: 10,081-31,749 (+)
IMGVR_UViG_3300035644_000049|3300035644|Ga0134398_00384: 10,105-33,635 (+)
IMGVR_UViG_3300045988_162132|3300045988|Ga0495776_043644: 10,105-33,212 (+)
MGV-GENOME-0275526: 10,105-32,616 (+)
MGV-GENOME-0264651: 10,105-33,586 (+)
MGV-GENOME-0258958: 10,110-32,578 (+)
MGV-GENOME-0264883: 10,105-33,626 (+)
IMGVR_UViG_3300045988_152761|3300045988|Ga0495776_086192: 10,105-32,992 (+)
MGV-GENOME-0258319: 10,104-32,475 (+)
MGV-GENOME-0264557: 10,105-33,569 (+)
MGV-GENOME-0263098: 10,105-33,315 (+)
IMGVR_UViG_3300045988_152690|3300045988|Ga0495776_148548: 10,105-33,939 (+)
IMGVR_UViG_3300030460_000054|3300030460|Ga0238582_100036: 10,105-33,748 (+)
IMGVR_UViG_3300045988_127251|3300045988|Ga0495776_043649: 10,105-33,212 (+)
MGV-GENOME-0267440: 10,105-34,110 (+)
IMGVR_UViG_3300045988_140172|3300045988|Ga0495776_071186: 10,105-36,244 (+)
RM__Type_I_S_52 (CDS_0028)
IMGVR_UViG_3300045988_164550|3300045988|Ga0495776_024917: 10,105-35,365 (+)
Septu__PtuA (CDS_0027)
Septu__PtuB (CDS_0028)
IMGVR_UViG_3300008571_000176|3300008571|Ga0111077_100475: 10,105-34,961 (+)
IMGVR_UViG_3300045988_135226|3300045988|Ga0495776_128062: 10,105-33,454 (+)
MGV-GENOME-0261144: 10,105-32,971 (+)
RT_III-AM_III-B_2 (CDS_0028)
IMGVR_UViG_3300045988_145016|3300045988|Ga0495776_071929: 10,105-34,529 (+)
RT_III-AM_III-B_2 (CDS_0027)
IMGVR_UViG_3300045988_144381|3300045988|Ga0495776_110957: 10,105-34,122 (+)
MGV-GENOME-0258660: 10,112-32,529 (+)
IMGVR_UViG_3300029560_000014|3300029560|Ga0244856_100557: 10,112-32,994 (+)
IMGVR_UViG_3300045988_167855|3300045988|Ga0495776_086177: 10,114-32,984 (+)
IMGVR_UViG_3300045988_162007|3300045988|Ga0495776_043240: 10,113-33,070 (+)
MGV-GENOME-0260562: 10,113-32,870 (+)
IMGVR_UViG_3300045988_162107|3300045988|Ga0495776_162904: 10,113-33,746 (+)
RT_III-AM_III-B_2 (CDS_0026)
IMGVR_UViG_3300045988_134810|3300045988|Ga0495776_110887: 10,107-34,090 (+)
RT_III-AM_III-B_2 (CDS_0027)
IMGVR_UViG_3300045988_136963|3300045988|Ga0495776_110767: 10,106-34,029 (+)
RT_III-AM_III-B_2 (CDS_0025)
MGV-GENOME-0267557: 10,083-34,133 (+)
IMGVR_UViG_3300014922_000008|3300014922|Ga0169850_100319: 10,083-34,047 (+)


HEase_00017 homing (CDS_0026)
23 22 21 24 25 27
MGV-GENOME-0274175: 10,112-35,387 (+)
23 22 25 21 24 26 27
IMGVR_UViG_3300045988_143963|3300045988|Ga0495776_110777: 10,114-34,033 (+)
24 23 22 25 26 27 28
T6SS-II (VF0783) (CDS_0029)
IMGVR_UViG_3300029430_000408|3300029430|Ga0243922_100227|65743-108664: 10,105-37,241 (+)
tail protein (CDS_0028)
24 23 27 22 25 26 29
IMGVR_UViG_3300045988_132142|3300045988|Ga0495776_113628: 10,105-35,076 (+)
24 23 28 22 25 26 27 29
IMGVR_UViG_3300045988_132542|3300045988|Ga0495776_111351: 10,105-34,284 (+)
24 23 22 25 26 27
IMGVR_UViG_3300029584_000372|3300029584|Ga0245112_100701|3079-41834: 10,105-33,075 (+)
24 23 22 25 26
IMGVR_UViG_3300029361_000334|3300029361|Ga0243815_1000537|16259-55064: 10,105-33,125 (+)
DNA methyltransferase (CDS_0026)
23 22 21 24 25 27 28 29 30
MGV-GENOME-0291129: 10,092-37,601 (+)
23 22 21 24 25 26 27 28
MGV-GENOME-0277105: 10,113-35,968 (+)
24 23 28 22 25 26 27 29
MGV-GENOME-0277281: 10,119-36,004 (+)
24 23 28 22 25 26 27 29
IMGVR_UViG_3300007299_000086|3300007299|Ga0104319_1000505: 10,105-34,483 (+)
24 23 22 25 26 27 28 29 30
MGV-GENOME-4419700: 10,105-37,223 (+)
24
RT_III-AM_III-B_2 (CDS_0030)
23 29 22 25 26 27 28 31
IMGVR_UViG_3300029584_000106|3300029584|Ga0245112_100701: 10,105-36,153 (+)
23 22 25 21 24 26 27
MGV-GENOME-0221706: 10,113-26,703 (+)
23 22 26 21 24 25 27
MGV-GENOME-0220938: 10,113-26,562 (+)
23 22 26 21 24 25 27
MGV-GENOME-0220591: 10,113-26,500 (+)
24 23 22 25 26 27
uvig_10847: 10,166-27,235 (+)
24 23 22 25 26
MGV-GENOME-0250001: 10,105-31,589 (+)
23 22 24 25
MGV-GENOME-0248556: 10,105-31,354 (+)
24 23 22 25 26 27 28
MGV-GENOME-0261023: 10,105-33,482 (+)
22 21 23 24 25
MGV-GENOME-0244117: 10,113-27,022 (+)
23 22 24 25
MGV-GENOME-0240104: 10,105-30,090 (+)
25 26 28
MGV-GENOME-0245857: 11,413-30,924 (+)
24 23 22 25 26 27 28 29 30 31
IMGVR_UViG_3300045988_168320|3300045988|Ga0495776_139780: 10,104-38,085 (+)
24
transcriptional regulator (CDS_0028)
23 31 22 25 26 27 29 30 32
OTU_1246: 10,105-40,826 (+)
22 23 21 24
MGV-GENOME-0256576: 10,106-32,179 (+)
23 22 24
MGV-GENOME-0250501: 10,082-31,133 (+)
23 22 24
MGV-GENOME-0265854: 10,105-31,209 (+)
23 24 22 25
RT_III-AM_III-B_2 (CDS_0026)
IMGVR_UViG_3300045988_159169|3300045988|Ga0495776_128081: 10,105-33,458 (+)
22 23 21 24 25 26
IMGVR_UViG_3300045988_140882|3300045988|Ga0495776_185784: 10,106-34,238 (+)
22 23 21 24 25
IMGVR_UViG_3300045988_161267|3300045988|Ga0495776_043464: 10,106-33,149 (+)
22 23 21 24 25
MGV-GENOME-0259841: 10,106-32,737 (+)
RT_III-AM_III-B_2 (CDS_0026)
22 23 21 24 25 27
MGV-GENOME-0268879: 10,106-34,381 (+)
23 24 22 25 26 27
MGV-GENOME-0219987: 10,105-26,399 (+)
22 23 25 21 24 26 27
MGV-GENOME-0223313: 10,106-26,967 (+)
RT_III-AM_III-B_2 (CDS_0027)
23 25 22 24 26 28
IMGVR_UViG_3300045988_126049|3300045988|Ga0495776_071930: 10,105-34,529 (+)
24 22 21 23 25 26
MGV-GENOME-0258269: 9,546-32,467 (+)
24 23 22 25 26
MGV-GENOME-0261145: 10,106-32,971 (+)
24 27 22 28 21 23 25 26 29 30 31
IMGVR_UViG_3300045988_152489|3300045988|Ga0495776_025104: 9,546-35,440 (+)
23 21 24 22 25
MGV-GENOME-0254555: 10,106-31,833 (+)
24 23
amidoligase enzyme (CDS_0032)
22 25 26 27 28 29 30 31 33
MGV-GENOME-0303572: 10,104-42,033 (+)
23 22 25 21 24 26 27 28
IMGVR_UViG_3300045988_115826|3300045988|Ga0495776_071764: 10,106-34,993 (+)
23 22 21 24
MGV-GENOME-0255959: 10,106-32,599 (+)
22 24 23 25 26 27
MGV-GENOME-0261816: 10,105-33,093 (+)
24
HEC-09 (CDS_0031)
23 27 32 22 25 26 28 29 30 33 34
IMGVR_UViG_3300045988_157952|3300045988|Ga0495776_093076: 10,105-39,125 (+)
anti-RM (APIS136) (CDS_0028)
24 23 30 22 25 26 27 29 31 32
MGV-GENOME-0284625: 10,105-37,423 (+)
anti-RM (APIS136) (CDS_0026)
23 22 28 21 24 25 27 29 30
MGV-GENOME-0283397: 10,106-37,194 (+)
anti-RM (APIS136) (CDS_0027)
24 23 29 22 25 26 28 30 31 32
IMGVR_UViG_3300045988_136238|3300045988|Ga0495776_094652: 10,106-37,292 (+)
anti-RM (APIS136) (CDS_0025)
23 22 27 21 24 26 28 29 30
MGV-GENOME-0280389: 10,106-36,630 (+)


anti-RM (APIS136) (CDS_0025)
IMGVR_UViG_3300045988_132907|3300045988|Ga0495776_025252: 10,105-35,505 (+)
anti-RM (APIS136) (CDS_0025)
MGV-GENOME-0280405: 10,106-36,633 (+)
tyrosyl-tRNA synthetase (CDS_0028)
anti-RM (APIS136) (CDS_0029)
IMGVR_UViG_3300045988_132908|3300045988|Ga0495776_099775: 10,106-38,373 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300029633_000149|3300029633|Ga0242758_100067|70803-112718: 10,105-36,235 (+)
IMGVR_UViG_3300029766_000012|3300029766|Ga0242809_100962: 10,105-35,517 (+)
anti-RM (APIS136) (CDS_0027)
IMGVR_UViG_3300045988_159160|3300045988|Ga0495776_099796: 10,112-38,381 (+)
anti-RM (APIS136) (CDS_0026)
MGV-GENOME-0284203: 10,113-37,338 (+)
anti-RM (APIS136) (CDS_0027)
IMGVR_UViG_2913987674_000001|2913987674|2913987680|33216-76592: 10,113-37,695 (+)
anti-RM (APIS136) (CDS_0027)
MGV-GENOME-0300031: 10,113-38,320 (+)
anti-RM (APIS136) (CDS_0027)
MGV-GENOME-0284073: 10,113-37,311 (+)
anti-RM (APIS136) (CDS_0027)
IMGVR_UViG_3300029482_000148|3300029482|Ga0244120_100308|27481-71730: 10,113-38,568 (+)
anti-RM (APIS136) (CDS_0027)
IMGVR_UViG_3300045988_155330|3300045988|Ga0495776_095045: 10,113-37,450 (+)
anti-RM (APIS136) (CDS_0027)
Reverse transcriptase (CDS_0031)
IMGVR_UViG_2887145323_000003|2887145323|2887145395: 10,113-37,566 (+)
anti-RM (APIS136) (CDS_0027)
IMGVR_UViG_3300045988_149594|3300045988|Ga0495776_055997: 10,107-37,707 (+)
MGV-GENOME-0288407: 10,113-36,784 (+)
MGV-GENOME-0276904: 10,113-35,927 (+)
IMGVR_UViG_3300029468_000203|3300029468|Ga0244207_100246|3161-44443: 10,113-35,601 (+)
anti-RM (APIS136) (CDS_0028)
MGV-GENOME-0284951: 10,113-37,480 (+)
anti-RM (APIS136) (CDS_0028)
MGV-GENOME-0288096: 10,113-38,165 (+)
anti-RM (APIS136) (CDS_0028)
MGV-GENOME-0288159: 10,113-38,178 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300029507_000132|3300029507|Ga0244816_100020|69459-112293: 10,113-37,153 (+)
anti-RM (APIS136) (CDS_0025)
IMGVR_UViG_2938037555_000003|2938037555|2938037555|581663-623282: 10,112-35,938 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300045988_166317|3300045988|Ga0495776_095181: 10,113-37,503 (+)
anti-RM (APIS136) (CDS_0026)
DpdF_00010 DpdF (CDS_0025)
IMGVR_UViG_2924828058_000004|2924828058|2924828080|69796-113503: 10,113-38,026 (+)
anti-RM (APIS136) (CDS_0026)
MGV-GENOME-0307224: 10,112-36,777 (+)
anti-RM (APIS136) (CDS_0026)
MGV-GENOME-0281893: 10,113-36,938 (+)
anti-RM (APIS136) (CDS_0026)
DNA polymerase (CDS_0025)
IMGVR_UViG_3300045988_154125|3300045988|Ga0495776_157267: 10,107-37,040 (+)
retron_type_VI_hth_cluster2_1 (CDS_0024)
anti-RM (APIS136) (CDS_0025)
IMGVR_UViG_3300045988_140493|3300045988|Ga0495776_147603: 10,113-35,738 (+)
anti-RM (APIS136) (CDS_0024)
IMGVR_UViG_3300045988_142946|3300045988|Ga0495776_070716: 10,113-36,017 (+)
anti-RM (APIS136) (CDS_0023)
MGV-GENOME-0321256: 10,113-35,255 (+)
anti-RM (APIS136) (CDS_0026)
RT_III-AM_III-B_2 (CDS_0030)
IMGVR_UViG_3300045988_136913|3300045988|Ga0495776_094625: 10,114-37,283 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300029358_000330|3300029358|Ga0243818_1000237|28836-70451: 10,105-35,935 (+)
MGV-GENOME-0283906: 10,109-34,512 (+)
anti-RM (APIS136) (CDS_0029)
IMGVR_UViG_3300029502_000133|3300029502|Ga0244223_100557: 10,113-40,462 (+)
Cable pilus (VF0700) (CDS_0026)
anti-RM (APIS136) (CDS_0027)
IMGVR_UViG_3300029571_000355|3300029571|Ga0244922_100559|3-43524: 10,113-37,840 (+)
anti-RM (APIS136) (CDS_0030)
MGV-GENOME-0302753: 10,113-40,406 (+)
anti-RM (APIS136) (CDS_0029)
IMGVR_UViG_3300029426_000094|3300029426|Ga0242789_100676: 10,105-40,879 (+)
IMGVR_UViG_3300045988_150903|3300045988|Ga0495776_110207: 10,105-35,840 (+)
IMGVR_UViG_3300045988_141769|3300045988|Ga0495776_110049: 10,113-35,785 (+)
MGV-GENOME-0285719: 10,112-33,889 (+)
IMGVR_UViG_3300029408_000004|3300029408|Ga0242748_1000187: 10,107-35,187 (+)
IMGVR_UViG_3300045988_133180|3300045988|Ga0495776_111047: 10,105-34,168 (+)
PDC-M64C_WP_110053925.1 (CDS_0029)
anti-RM (APIS136) (CDS_0033)
SspB_00001 SspB (CDS_0030)
SspC_00007 SspC (CDS_0031)
IMGVR_UViG_3300029541_000196|3300029541|Ga0244914_100244|26661-74633: 10,112-42,291 (+)
anti-RM (APIS136) (CDS_0026)
MGV-GENOME-0279462: 10,105-36,446 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300045988_144853|3300045988|Ga0495776_027781: 10,105-36,446 (+)


anti-RM (APIS136) (CDS_0027)
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IMGVR_UViG_3300045988_148316|3300045988|Ga0495776_099825:10,106-38,395 (+)
anti-RM (APIS136) (CDS_0027)
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IMGVR_UViG_3300023504_000390|3300023504|Ga0257038_1000624|43082-86468:10,103-37,706 (+)
anti-RM (APIS136) (CDS_0028)
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IMGVR_UViG_3300045988_162457|3300045988|Ga0495776_094878:10,105-37,386 (+)
anti-RM (APIS136) (CDS_0028)
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IMGVR_UViG_3300007650_000223|3300007650|Ga0105532_100068|57386-100312:10,105-37,246 (+)
anti-RM (APIS136) (CDS_0028)
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IMGVR_UViG_3300045988_149140|3300045988|Ga0495776_094845:10,105-37,370 (+)
anti-RM (APIS136) (CDS_0028)
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IMGVR_UViG_3300045988_150351|3300045988|Ga0495776_173206:10,105-37,499 (+)
anti-RM (APIS136) (CDS_0028)
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MGV-GENOME-0286213:10,105-37,753 (+)
anti-RM (APIS136) (CDS_0028)
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IMGVR_UViG_3300029520_000288|3300029520|Ga0244801_100441|225-43501:10,105-37,596 (+)
anti-RM (APIS136) (CDS_0028)
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MGV-GENOME-0290842:10,105-37,243 (+)
anti-RM (APIS136) (CDS_0028)
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MGV-GENOME-0282740:10,105-37,101 (+)
anti-RM (APIS136) (CDS_0028)
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IMGVR_UViG_3300045988_137632|3300045988|Ga0495776_157079:10,105-37,542 (+)
anti-RM (APIS136) (CDS_0028)
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IMGVR_UViG_3300045988_129597|3300045988|Ga0495776_094876:10,105-37,386 (+)
anti-RM (APIS136) (CDS_0028)
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MGV-GENOME-0285687:10,105-37,639 (+)
anti-RM (APIS136) (CDS_0028)
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IMGVR_UViG_3300045988_130096|3300045988|Ga0495776_056003:10,105-37,709 (+)
anti-RM (APIS136) (CDS_0028)
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IMGVR_UViG_3300045988_163200|3300045988|Ga0495776_094778:10,105-37,344 (+)
anti-RM (APIS136) (CDS_0028)
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IMGVR_UViG_2901565716_000022|2901565716|2901565725|108-43938:10,105-38,150 (+)
anti-RM (APIS136) (CDS_0028)
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MGV-GENOME-0285907:10,105-37,685 (+)
anti-RM (APIS136) (CDS_0028)
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IMGVR_UViG_3300045988_164731|3300045988|Ga0495776_094988:10,105-37,428 (+)
anti-RM (APIS136) (CDS_0028)
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MGV-GENOME-0284976:10,105-37,486 (+)
anti-RM (APIS136) (CDS_0028)
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MGV-GENOME-0284850:10,105-37,463 (+)
anti-RM (APIS136) (CDS_0028)
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IMGVR_UViG_3300014564_000210|3300014564|Ga0169885_100159|3-43698:10,138-37,992 (+)
anti-RM (APIS136) (CDS_0029)
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MGV-GENOME-0285427:10,105-38,242 (+)
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anti-RM (APIS136) (CDS_0029)
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MGV-GENOME-0291023:10,105-38,832 (+)
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anti-RM (APIS136) (CDS_0029)
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IMGVR_UViG_3300029794_000174|3300029794|Ga0243854_1000745:10,105-40,661 (+)
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anti-RM (APIS136) (CDS_0029)
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IMGVR_UViG_3300028997_000011|3300028997|Ga0169671_100121:10,105-38,606 (+)
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anti-RM (APIS136) (CDS_0029)
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IMGVR_UViG_3300029840_000351|3300029840|Ga0245268_100481|11820-56701:10,105-39,201 (+)
anti-RM (APIS136) (CDS_0028)
DNA helicase (CDS_0027)
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IMGVR_UViG_3300045988_123390|3300045988|Ga0495776_171203:10,105-40,080 (+)
anti-RM (APIS136) (CDS_0028)
transaldolase (CDS_0027)
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IMGVR_UViG_3300014919_000072|3300014919|Ga0169798_100073|33716-77044:10,105-37,648 (+)
anti-RM (APIS136) (CDS_0027)
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IMGVR_UViG_3300045988_132145|3300045988|Ga0495776_067593:10,105-37,055 (+)
anti-RM (APIS136) (CDS_0028)
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IMGVR_UViG_3300029665_000005|3300029665|Ga0243765_100425:10,105-37,338 (+)
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anti-RM (APIS136) (CDS_0029)
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MGV-GENOME-0290326:10,105-38,670 (+)
anti-RM (APIS136) (CDS_0027)
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MGV-GENOME-0287059:10,105-36,470 (+)
anti-RM (APIS136) (CDS_0027)
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IMGVR_UViG_3300007097_000157|3300007097|Ga0102537_100086|21088-63962:10,105-37,194 (+)
anti-RM (APIS136) (CDS_0027)
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IMGVR_UViG_3300023543_000266|3300023543|Ga0257048_100010|240841-284435:10,105-37,914 (+)
anti-RM (APIS136) (CDS_0027)
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IMGVR_UViG_3300029790_000415|3300029790|Ga0242825_100352|15271-59001:10,105-38,050 (+)
anti-RM (APIS136) (CDS_0027)
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IMGVR_UViG_3300045988_168263|3300045988|Ga0495776_135959:10,105-37,182 (+)
anti-RM (APIS136) (CDS_0027)
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IMGVR_UViG_3300045988_169402|3300045988|Ga0495776_172676:10,105-36,594 (+)
anti-RM (APIS136) (CDS_0027)
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MGV-GENOME-0306864:10,105-36,529 (+)
anti-RM (APIS136) (CDS_0027)
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IMGVR_UViG_3300007793_000423|3300007793|Ga0105888_100004|125477-168473:10,105-37,316 (+)
BSH (VF0350) (CDS_0026)
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anti-RM (APIS136) (CDS_0027)
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IMGVR_UViG_3300007796_000299|3300007796|Ga0105889_100360|11985-56996:10,105-39,331 (+)
anti-RM (APIS136) (CDS_0028)
endonuclease (CDS_0027)
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IMGVR_UViG_3300029786_000354|3300029786|Ga0243817_1000024|250569-294417:10,105-38,168 (+)
anaerobic ribonucleoside reductase large subunit (CDS_0027)
anti-RM (APIS136) (CDS_0028)
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IMGVR_UViG_3300045988_149986|3300045988|Ga0495776_181936:10,105-39,191 (+)
24
anti-RM (APIS136) (CDS_0028)
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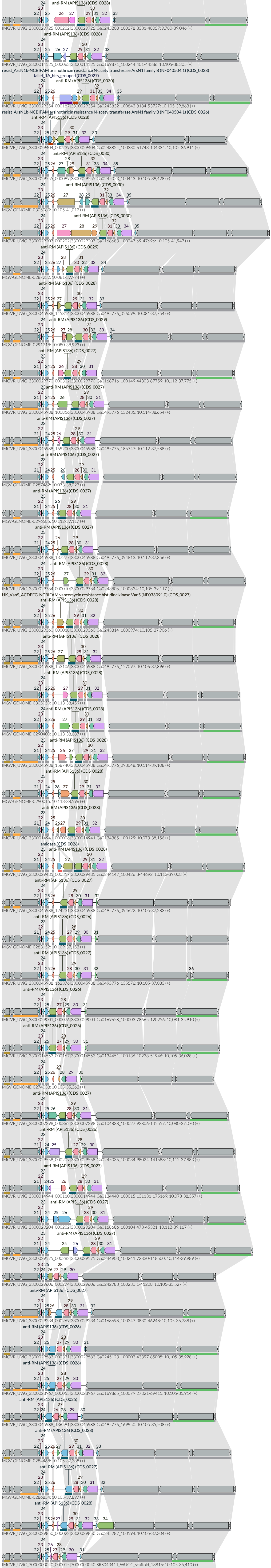
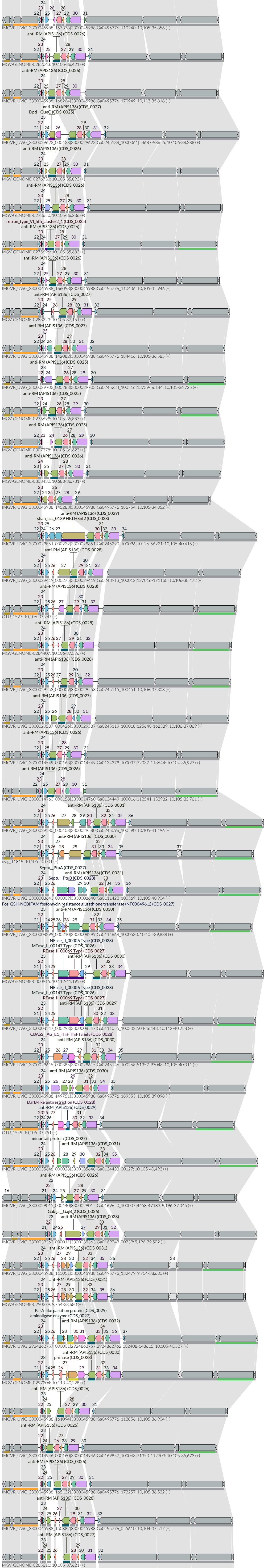
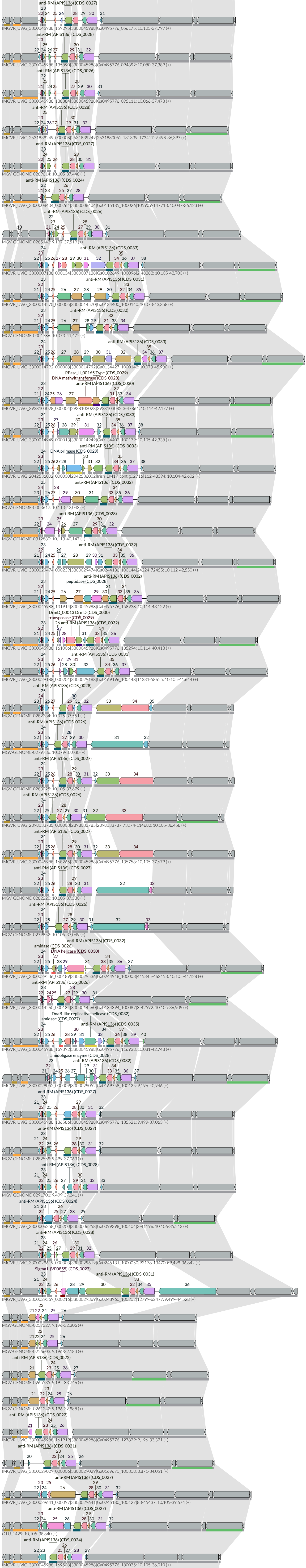
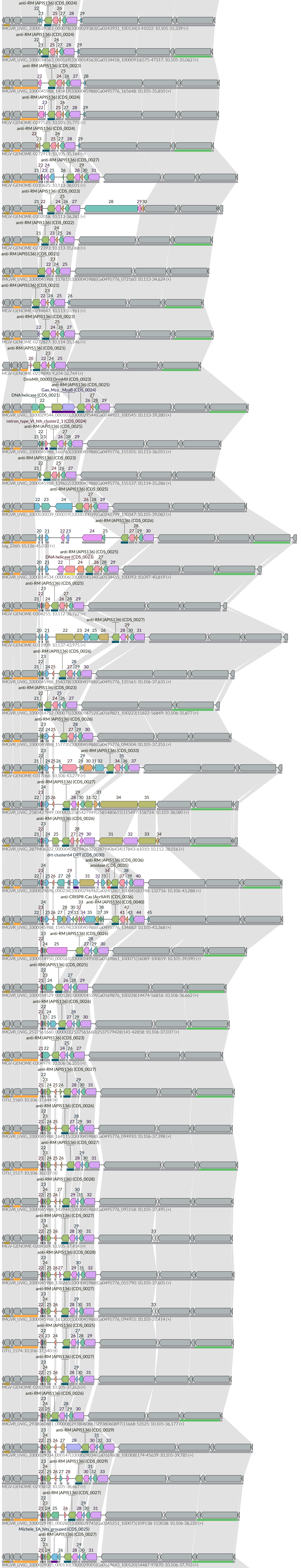
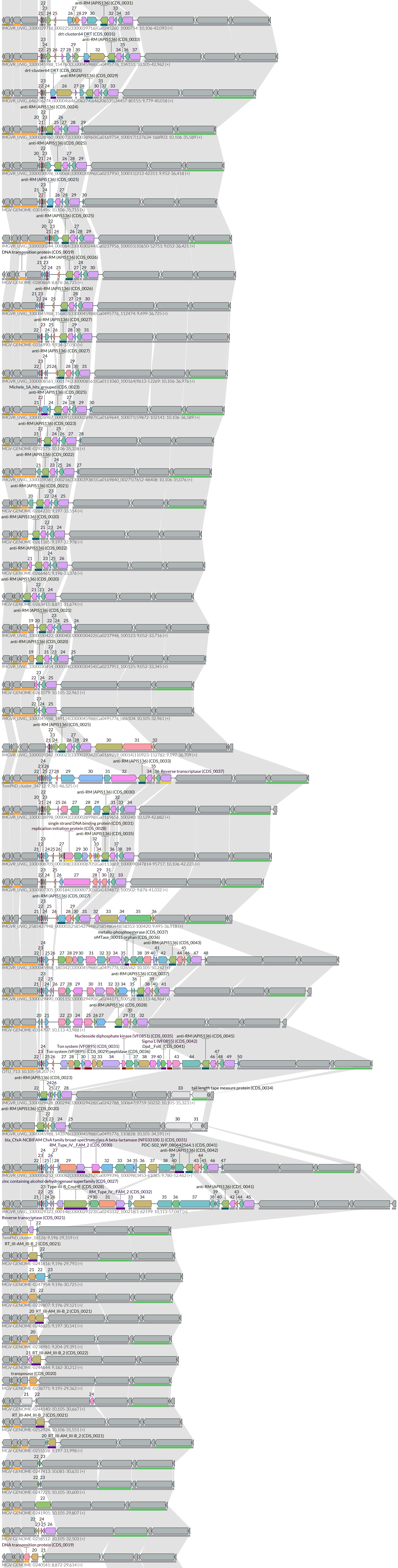
MGV-GENOME-0291752:10,105-39,001 (+)

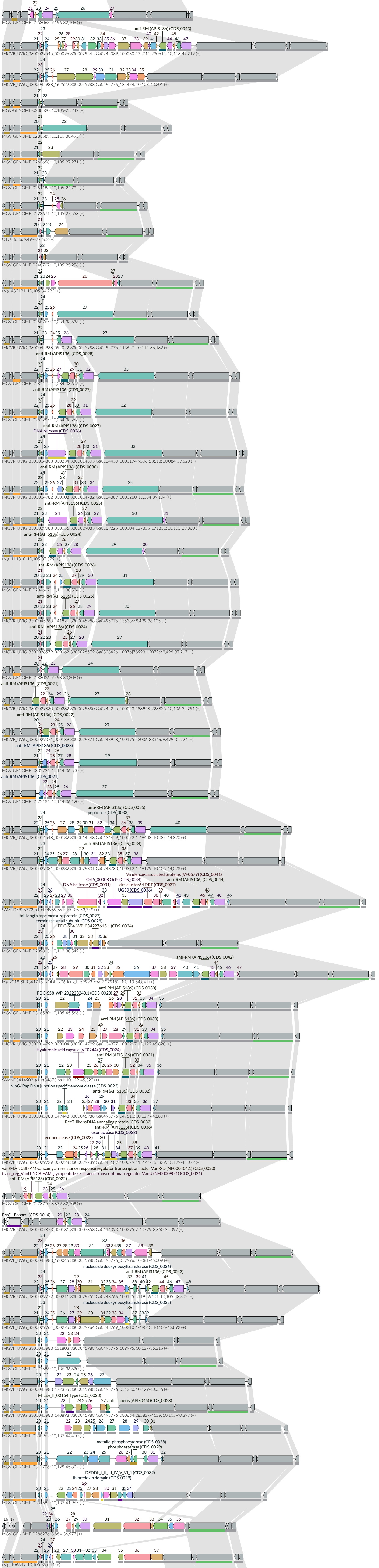

anti-RM (APIS136) (CDS_0028)
24 23 30
22 25 26 27 29 31 32 33
IMGVR_UViG_3300029725_000202|3300029725|Ga0245208_100378|3331-48057: 9,780-39,046 (+)
anti-RM (APIS136) (CDS_0028)
24 23 30
22 25 26 27 29 31 32 33
IMGVR_UViG_3300014525_000063|3300014525|Ga0169871_100244|401-44386: 10,105-38,305 (+)
resist_ArsN1b-NCBIFAM arsinothricin resistance N-acetyltransferase ArsN1 family B (NF040504.1) (CDS_0028)
Jallet_1A_hits_grouped (CDS_0027)
anti-RM (APIS136) (CDS_0030)
24 23 32
22 25 26 29 31 33 34 35
IMGVR_UViG_3300029354_000187|3300029354|Ga0243832_100842|8184-53727: 10,105-39,863 (+)
resist_ArsN1b-NCBIFAM arsinothricin resistance N-acetyltransferase ArsN1 family B (NF040504.1) (CDS_0026)
anti-RM (APIS136) (CDS_0028)
24 23 30
22 25 27 29 31 32 33
IMGVR_UViG_3300029404_000239|3300029404|Ga0243824_100330|61743-104334: 10,105-36,911 (+)
24 anti-RM (APIS136) (CDS_0030)
23 28 32
22 25 26 27 29 31 33 34 35
IMGVR_UViG_3300029555_000099|3300029555|Ga0245053_100443: 10,105-39,428 (+)
24 anti-RM (APIS136) (CDS_0030)
23 32
22 25 26 27 28 29 31 33 34 35
MGV-GENOME-0305080: 10,105-41,012 (+)
24 anti-RM (APIS136) (CDS_0030)
23 32
22 25 26 27 28 29 31 33 34 35
IMGVR_UViG_3300029207_000202|3300029207|Ga0168683_100247|69-47696: 10,105-41,947 (+)
anti-RM (APIS136) (CDS_0029)
24 23 28 31
22 25 26 27 30 32 33 34
MGV-GENOME-0287232: 10,081-37,974 (+)
anti-RM (APIS136) (CDS_0028)
24 23 30
22 25 26 27 29 31 32 33
IMGVR_UViG_3300045988_145314|3300045988|Ga0495776_056099: 10,081-37,754 (+)
24 anti-RM (APIS136) (CDS_0029)
23 31
22 25 26 27 28 30 32 33 34
MGV-GENOME-0291718: 10,080-38,993 (+)
anti-RM (APIS136) (CDS_0027)
23 22 29
21 24 25 26 28 30 31
IMGVR_UViG_3300029770_000302|3300029770|Ga0168716_100149|44303-87759: 10,112-37,775 (+)
23 anti-RM (APIS136) (CDS_0027)
22 29
21 24 25 26 28 30 31
IMGVR_UViG_3300045988_100816|3300045988|Ga0495776_132435: 10,114-38,654 (+)
anti-RM (APIS136) (CDS_0027)
23 22 29
21 24 25 26 28 30 31
IMGVR_UViG_3300045988_169200|3300045988|Ga0495776_185747: 10,112-37,588 (+)
anti-RM (APIS136) (CDS_0027)
23 22 29
21 24 25 26 28 30 31
MGV-GENOME-0287462: 10,073-38,023 (+)
anti-RM (APIS136) (CDS_0027)
23 22 26 29
21 24 25 28 30 31
MGV-GENOME-0296585: 10,112-37,117 (+)
anti-RM (APIS136) (CDS_0027)
23 22 26 29
21 24 25 28 30 31
IMGVR_UViG_3300045988_137277|3300045988|Ga0495776_094813: 10,112-37,356 (+)
24 anti-RM (APIS136) (CDS_0028)
23 30
22 25 26 27 29 31 32
IMGVR_UViG_3300029784_000010|3300029784|Ga0243806_1000834: 10,105-39,117 (+)
HK_VanS_ACDEFG-NCBIFAM vancomycin resistance histidine kinase VanS (NF033091.0) (CDS_0027)
anti-RM (APIS136) (CDS_0028)
24 23 30
22 25 26 29 31 32
IMGVR_UViG_3300029360_000018|3300029360|Ga0243814_1000974: 10,105-37,906 (+)
anti-RM (APIS136) (CDS_0028)
24 23 30
22 25 26 27 29 31 32
IMGVR_UViG_3300045988_153106|3300045988|Ga0495776_157097: 10,106-37,896 (+)
anti-RM (APIS136) (CDS_0028)
24 23 30
22 25 26 27 29 31 32
MGV-GENOME-0305050: 10,113-38,459 (+)
24 anti-RM (APIS136) (CDS_0028)
23 30
22 25 26 27 29 31 32
MGV-GENOME-0290400: 10,113-38,687 (+)
23 anti-RM (APIS136) (CDS_0028)
22 30
21 24 25 26 27 29 31 32
IMGVR_UViG_3300045988_158740|3300045988|Ga0495776_093048: 10,114-39,108 (+)
anti-RM (APIS136) (CDS_0028)
23 22 25 30
21 24 26 27 29 31 32
MGV-GENOME-0290015: 10,113-38,596 (+)
anti-RM (APIS136) (CDS_0028)
23 22 25 30
21 24 2627 29 31 32
IMGVR_UViG_3300014941_000006|3300014941|Ga0134385_100129: 10,073-38,156 (+)
amidase (CDS_0026)
23 anti-RM (APIS136) (CDS_0028)
22 30
21 24 25 27 29 31 32
IMGVR_UViG_3300029485_000317|3300029485|Ga0244147_100426|3-44692: 10,113-39,008 (+)
anti-RM (APIS136) (CDS_0027)
24 23 29
22 25 26 28 30 31 32
IMGVR_UViG_3300045988_124231|3300045988|Ga0495776_094622: 10,105-37,283 (+)
anti-RM (APIS136) (CDS_0026)
23 22 28
21 24 25 27 29 30 31
MGV-GENOME-0283152: 10,109-37,153 (+)
anti-RM (APIS136) (CDS_0027)
24 23 29
22 25 26 28 30 31 32 36
IMGVR_UViG_3300045988_162376|3300045988|Ga0495776_135576: 10,105-37,083 (+)
anti-RM (APIS136) (CDS_0026)
24 23 28
22 25 27 29 30 31
IMGVR_UViG_3300029001_000076|3300029001|Ga0169658_100003|78665-120256: 10,081-35,910 (+)
anti-RM (APIS136) (CDS_0026)
24 23 28
22 25 27 29 30 31
IMGVR_UViG_3300014553_000167|3300014553|Ga0134451_100136|10238-51946: 10,105-36,028 (+)
24 23 27
22 25 26 28 29 30
MGV-GENOME-0274038: 10,105-35,363 (+)
anti-RM (APIS136) (CDS_0027)
24 23 29
22 25 26 28 30 31
IMGVR_UViG_3300007298_000362|3300007298|Ga0104838_100027|92806-135557: 10,080-37,070 (+)
anti-RM (APIS136) (CDS_0026)
23 22 28
21 24 25 27 29 30
IMGVR_UViG_3300029558_000209|3300029558|Ga0245036_100034|98024-141588: 10,112-37,883 (+)
anti-RM (APIS136) (CDS_0027)
23 22 29
21 2425 26 28 30 31
IMGVR_UViG_3300014944_000110|3300014944|Ga0134440_100015|131131-175169: 10,073-38,357 (+)
23 anti-RM (APIS136) (CDS_0027)
22 29
21 24 25 26 28 30 31
IMGVR_UViG_3300029204_000202|3300029204|Ga0168686_100104|473-45321: 10,112-39,167 (+)
23 anti-RM (APIS136) (CDS_0027)
22 29
21 24 25 26 28 30 31
IMGVR_UViG_3300029575_000282|3300029575|Ga0244903_100241|72830-118500: 10,114-39,989 (+)
23 25 28
22 24 26 27 29 30
IMGVR_UViG_3300029606_000274|3300029606|Ga0242783_100230|1-41208: 10,105-35,527 (+)
anti-RM (APIS136) (CDS_0027)
24 23 29
22 2526 28 30 31 32
IMGVR_UViG_3300029234_000269|3300029234|Ga0168698_100347|3830-46248: 10,105-36,738 (+)
anti-RM (APIS136) (CDS_0026)
24 23 28
22 25 27 29 30 31
IMGVR_UViG_3300029583_000331|3300029583|Ga0245123_100003|43397-85005: 10,105-35,928 (+)
anti-RM (APIS136) (CDS_0026)
24 23 28
22 25 27 29 30
IMGVR_UViG_3300028967_000055|3300028967|Ga0169865_100079|27821-69415: 10,105-35,914 (+)
anti-RM (APIS136) (CDS_0025)
23 27
22 24 26 28 29 30
IMGVR_UViG_3300045988_136591|3300045988|Ga0495776_169950: 10,105-35,508 (+)
anti-RM (APIS136) (CDS_0028)
24 23 30
22 25 26 27 29 31 32 33
MGV-GENOME-0284468: 10,105-37,388 (+)
anti-RM (APIS136) (CDS_0027)
24 23 29
22 25 26 28 30 31 32
MGV-GENOME-0286854: 10,105-37,897 (+)
anti-RM (APIS136) (CDS_0028)
24 23 30
22 25 26 27 29 31 32 33 34
IMGVR_UViG_3300029850_000022|3300029850|Ga0245287_100594: 10,105-37,304 (+)
24 23 26 28
22 25 27 29 30 31
IMGVR_UViG_7000000040_000015|7000000040|SRS043411_WUGC_scaffold_13816: 10,105-35,410 (+)

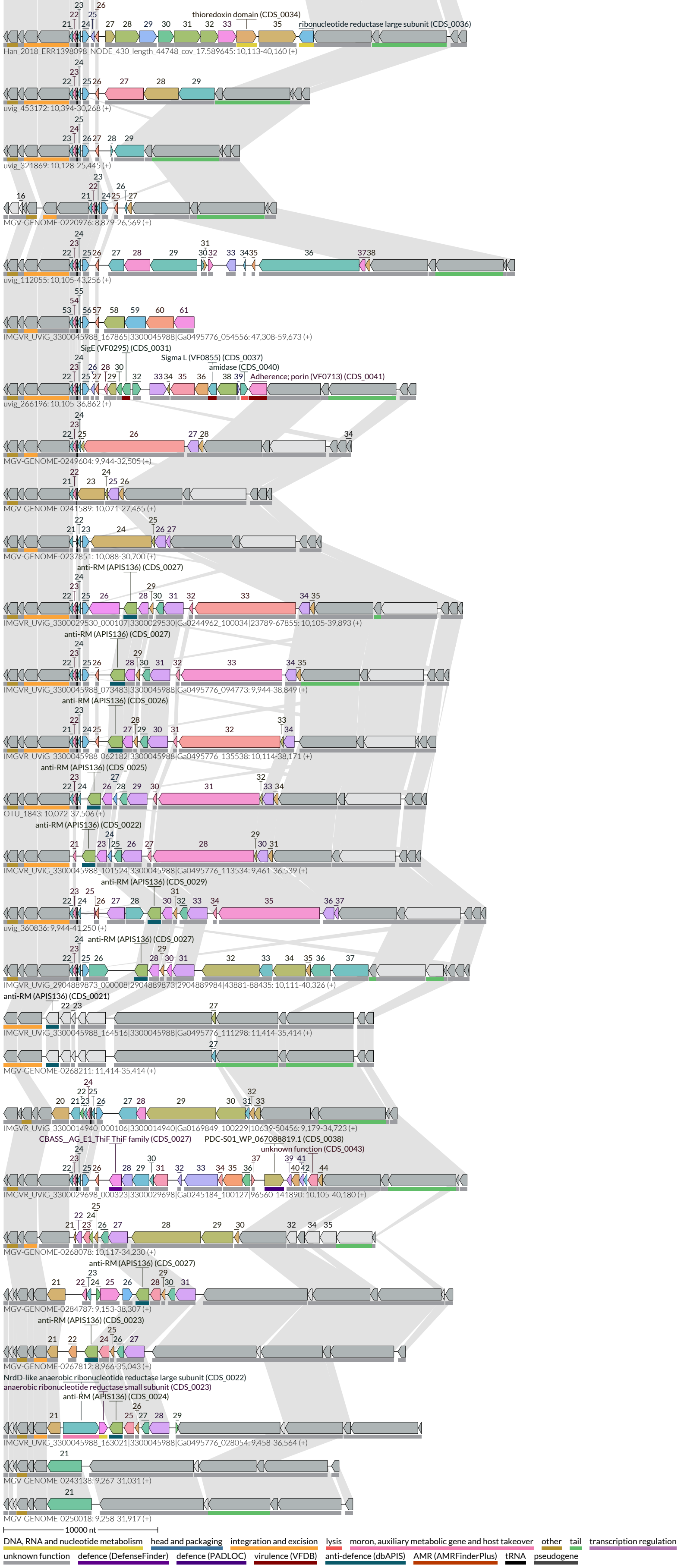

IMGVR_UViG_3300045988_157378|3300045988|Ga0495776_110240: 10,105-35,856 (+)
anti-RM (APIS136) (CDS_0026)
MGV-GENOME-0282043: 10,105-36,421 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300045988_168264|3300045988|Ga0495776_170949: 10,113-35,818 (+)
anti-RM (APIS136) (CDS_0027)
Dpd__QueC (CDS_0025)
IMGVR_UViG_3300029623_000438|3300029623|Ga0245138_1000061|54687-98655: 10,106-38,288 (+)
anti-RM (APIS136) (CDS_0026)
MGV-GENOME-0276730: 10,105-35,893 (+)
anti-RM (APIS136) (CDS_0026)
MGV-GENOME-0278650: 10,105-36,286 (+)
retron_type_VI_hth_cluster2_1 (CDS_0025)
anti-RM (APIS136) (CDS_0026)
MGV-GENOME-0275696: 10,105-35,683 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300045988_166093|3300045988|Ga0495776_110436: 10,105-35,946 (+)
anti-RM (APIS136) (CDS_0027)
MGV-GENOME-0283223: 10,105-37,161 (+)
anti-RM (APIS136) (CDS_0027)
IMGVR_UViG_3300045988_142082|3300045988|Ga0495776_184416: 10,105-36,585 (+)
anti-RM (APIS136) (CDS_0025)
IMGVR_UViG_3300029703_000288|3300029703|Ga0245234_100516|13739-56144: 10,105-36,725 (+)
anti-RM (APIS136) (CDS_0025)
MGV-GENOME-0276699: 10,105-35,887 (+)
anti-RM (APIS136) (CDS_0025)
MGV-GENOME-0307378: 10,105-36,623 (+)
anti-RM (APIS136) (CDS_0026)
MGV-GENOME-0303430: 10,688-36,731 (+)
IMGVR_UViG_3300045988_145283|3300045988|Ga0495776_186754: 10,105-34,852 (+)
anti-RM (APIS136) (CDS_0029)
shah_acc_0139 HKD+Snf2 (CDS_0028)
IMGVR_UViG_3300029851_000232|3300029851|Ga0245290_100096|10126-56221: 10,105-40,415 (+)
anti-RM (APIS136) (CDS_0028)
IMGVR_UViG_3300029419_000275|3300029419|Ga0243913_100012|127016-171168: 10,106-38,472 (+)
anti-RM (APIS136) (CDS_0028)
OTU_1527: 10,106-37,947 (+)
anti-RM (APIS136) (CDS_0028)
MGV-GENOME-0284407: 10,106-37,376 (+)
anti-RM (APIS136) (CDS_0028)
IMGVR_UViG_3300029553_000099|3300029553|Ga0245115_100451: 10,106-37,303 (+)
anti-RM (APIS136) (CDS_0027)
IMGVR_UViG_3300029587_000426|3300029587|Ga0245119_100018|125640-168389: 10,106-37,069 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300014549_000163|3300014549|Ga0134379_100037|72037-113644: 10,104-35,927 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300014760_000158|3300014760|Ga0134449_100016|112541-153982: 10,105-35,761 (+)
anti-RM (APIS136) (CDS_0031)
IMGVR_UViG_3300029580_000103|3300029580|Ga0245096_100590: 10,105-41,196 (+)
anti-RM (APIS136) (CDS_0030)
uvig_11819: 10,105-40,001 (+)
Septu__PtuA (CDS_0027)
anti-RM (APIS136) (CDS_0031)
Septu__PtuB (CDS_0028)
IMGVR_UViG_3300008640_000009|3300008640|Ga0111422_100369: 10,105-40,904 (+)
Fos_GSH-NCBIFAM fosfomycin resistance glutathione transferase (NF000496.1) (CDS_0027)
anti-RM (APIS136) (CDS_0030)
IMGVR_UViG_3300008299_000210|3300008299|Ga0114866_1000530: 10,105-39,838 (+)
NEase_II_00006 Type (CDS_0028)
MTase_II_00147 Type (CDS_0026)
REase_II_00069 Type (CDS_0027)
anti-RM (APIS136) (CDS_0030)
MGV-GENOME-0300915: 10,112-41,195 (+)
NEase_II_00006 Type (CDS_0028)
MTase_II_00147 Type (CDS_0026)
REase_II_00069 Type (CDS_0027)
anti-RM (APIS136) (CDS_0029)
IMGVR_UViG_3300008547_000298|3300008547|Ga0111055_100302|504-46443: 10,112-40,258 (+)
CBASS__AG_E1_ThiF ThiF family (CDS_0028)
anti-RM (APIS136) (CDS_0030)
IMGVR_UViG_3300029615_000385|3300029615|Ga0245146_100268|51357-97048: 10,105-40,011 (+)
anti-RM (APIS136) (CDS_0030)
IMGVR_UViG_3300045988_149751|3300045988|Ga0495776_189353: 10,105-39,098 (+)
DarB-like antirestriction (CDS_0028)
anti-RM (APIS136) (CDS_0029)
OTU_1549: 10,105-37,751 (+)
minor tail protein (CDS_0027)
anti-RM (APIS136) (CDS_0031)
IMGVR_UViG_3300035648_000028|3300035648|Ga0134433_00127: 10,105-40,493 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300029015_000140|3300029015|Ga0169650_100007|4458-47183: 9,196-37,045 (+)
Gabija__GajB_2 (CDS_0026)
anti-RM (APIS136) (CDS_0028)
IMGVR_UViG_3300039363_000011|3300039363|Ga0169243_00239: 9,196-39,502 (+)
anti-RM (APIS136) (CDS_0031)
IMGVR_UViG_3300045988_115051|3300045988|Ga0495776_132479: 9,754-38,680 (+)
anti-RM (APIS136) (CDS_0031)
MGV-GENOME-0290379: 9,754-38,680 (+)
ParA-like partition protein (CDS_0029)
amidoligase enzyme (CDS_0027)
anti-RM (APIS136) (CDS_0032)
IMGVR_UViG_2924862757_000007|2924862757|2924862769|102408-148615: 10,105-40,527 (+)
anti-RM (APIS136) (CDS_0030)
primase (CDS_0028)
MGV-GENOME-0297204: 10,113-40,228 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300045988_161094|3300045988|Ga0495776_112856: 10,105-36,904 (+)
anti-RM (APIS136) (CDS_0025)
IMGVR_UViG_3300014946_000160|3300014946|Ga0169857_100043|71350-112703: 10,105-35,673 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300045988_165132|3300045988|Ga0495776_172257: 10,105-36,522 (+)
anti-RM (APIS136) (CDS_0028)
IMGVR_UViG_3300045988_150882|3300045988|Ga0495776_055610: 10,104-37,517 (+)
anti-RM (APIS136) (CDS_0027)
MGV-GENOME-0285611: 10,105-37,621 (+)


anti-RM (APIS136) (CDS_0027)
IMGVR_UViG_3300045988_159295|3300045988|Ga0495776_056175: 10,105-37,797 (+)
anti-RM (APIS136) (CDS_0028)
IMGVR_UViG_3300045988_138890|3300045988|Ga0495776_094892: 10,080-37,389 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300045988_138388|3300045988|Ga0495776_095111: 10,066-37,473 (+)
anti-RM (APIS136) (CDS_0028)
IMGVR_UViG_2531839249_000008|2531839249|2531880052|131339-173417: 9,498-36,397 (+)
anti-RM (APIS136) (CDS_0027)
MGV-GENOME-0289614: 10,105-37,448 (+)
anti-RM (APIS136) (CDS_0024)
IMGVR_UViG_3300008404_000261|3300008404|Ga0115185_100026|105909-147713: 10,047-36,123 (+)
anti-RM (APIS136) (CDS_0026)
MGV-GENOME-0285143: 9,197-37,519 (+)
anti-RM (APIS136) (CDS_0033)
IMGVR_UViG_3300007138_000134|3300007138|Ga0102649_100096|2-43382: 10,105-42,700 (+)
anti-RM (APIS136) (CDS_0031)
IMGVR_UViG_3300014570_000005|3300014570|Ga0134400_1000140: 10,073-43,358 (+)
anti-RM (APIS136) (CDS_0030)
MGV-GENOME-0301786: 10,073-41,475 (+)
anti-RM (APIS136) (CDS_0033)
IMGVR_UViG_3300014792_000008|3300014792|Ga0134427_1000142: 10,073-45,980 (+)
REase_II_00165 Type (CDS_0029)
DNA methyltransferase (CDS_0028)
anti-RM (APIS136) (CDS_0030)
IMGVR_UViG_2938100028_000004|2938100028|2938100028|3-47861: 10,114-42,177 (+)
anti-RM (APIS136) (CDS_0033)
IMGVR_UViG_3300014949_000013|3300014949|Ga0134402_100179: 10,105-42,338 (+)
anti-RM (APIS136) (CDS_0033)
DNA primase (CDS_0029)
IMGVR_UViG_2042536002_000030|2042536002|Inshi_EM17_contig02716|12-48394: 10,104-42,602 (+)
anti-RM (APIS136) (CDS_0032)
MGV-GENOME-0303617: 10,113-42,043 (+)
anti-RM (APIS136) (CDS_0028)
MGV-GENOME-0312880: 10,113-40,147 (+)
anti-RM (APIS136) (CDS_0032)
IMGVR_UViG_3300029474_000239|3300029474|Ga0244336_1000144|24224-72455: 10,112-42,550 (+)
anti-RM (APIS136) (CDS_0032)
peptidase (CDS_0028)
IMGVR_UViG_3300045988_131914|3300045988|Ga0495776_158938: 10,114-43,122 (+)
DrmD_00013 DrmD (CDS_0030)
transposase (CDS_0029)
anti-RM (APIS136) (CDS_0032)
IMGVR_UViG_3300045988_161006|3300045988|Ga0495776_185294: 10,114-40,413 (+)
anti-RM (APIS136) (CDS_0033)
IMGVR_UViG_3300029188_000201|3300029188|Ga0169196_100148|11331-58655: 10,105-41,644 (+)
anti-RM (APIS136) (CDS_0028)
MGV-GENOME-0282384: 10,075-37,551 (+)
anti-RM (APIS136) (CDS_0026)
MGV-GENOME-0279736: 10,079-37,030 (+)
anti-RM (APIS136) (CDS_0027)
MGV-GENOME-0283025: 10,105-37,679 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_2898033785_000003|2898033785|2898033787|73074-114682: 10,105-36,458 (+)
anti-RM (APIS136) (CDS_0027)
IMGVR_UViG_3300045988_168265|3300045988|Ga0495776_135758: 10,105-37,679 (+)
anti-RM (APIS136) (CDS_0027)
MGV-GENOME-0282220: 10,105-37,530 (+)
anti-RM (APIS136) (CDS_0026)
MGV-GENOME-0279852: 10,105-37,049 (+)
anti-RM (APIS136) (CDS_0032)
amidase (CDS_0026)
DNA helicase (CDS_0030)
IMGVR_UViG_3300029536_000189|3300029536|Ga0244918_1000003|415345-462153: 10,105-41,128 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300014560_000184|3300014560|Ga0134394_1000087|3-42592: 10,105-36,909 (+)
DnaB-like replicative helicase (CDS_0032)
amidase (CDS_0027)
anti-RM (APIS136) (CDS_0035)
IMGVR_UViG_3300045988_169392|3300045988|Ga0495776_116938: 10,081-42,748 (+)
amidoligase enzyme (CDS_0028)
anti-RM (APIS136) (CDS_0032)
IMGVR_UViG_3300029052_000009|3300029052|Ga0169758_100125: 9,196-40,946 (+)
anti-RM (APIS136) (CDS_0027)
IMGVR_UViG_3300045988_136586|3300045988|Ga0495776_135521: 9,499-37,063 (+)
anti-RM (APIS136) (CDS_0027)
MGV-GENOME-0282559: 9,499-37,063 (+)
anti-RM (APIS136) (CDS_0028)
MGV-GENOME-0291701: 9,499-37,241 (+)
anti-RM (APIS136) (CDS_0024)
IMGVR_UViG_3300006258_000200|3300006258|Ga0099398_100104|3-41196: 10,106-35,513 (+)
anti-RM (APIS136) (CDS_0028)
IMGVR_UViG_3300029619_000303|3300029619|Ga0245131_1000050|92178-134700: 9,499-36,842 (+)
Sigma L (VF0855) (CDS_0027)
anti-RM (APIS136) (CDS_0031)
IMGVR_UViG_3300029369_000216|3300029369|Ga0243960_1000202|12799-62477: 9,499-44,528 (+)
MGV-GENOME-0257327: 9,196-32,306 (+)
MGV-GENOME-0256603: 9,196-32,183 (+)
anti-RM (APIS136) (CDS_0022)
MGV-GENOME-0265535: 9,195-33,746 (+)
MGV-GENOME-0261242: 9,196-32,988 (+)
anti-RM (APIS136) (CDS_0022)
IMGVR_UViG_3300045988_161919|3300045988|Ga0495776_127829: 9,196-33,371 (+)
anti-RM (APIS136) (CDS_0021)
IMGVR_UViG_3300029029_000008|3300029029|Ga0169670_100308: 8,871-34,051 (+)
anti-RM (APIS136) (CDS_0027)
IMGVR_UViG_3300029641_000097|3300029641|Ga0245180_100127|83-45437: 10,105-39,674 (+)
anti-RM (APIS136) (CDS_0027)
DTU_1429: 10,105-38,840 (+)
anti-RM (APIS136) (CDS_0024)
IMGVR_UViG_3300045988_169508|3300045988|Ga0495776_180035: 10,105-36,010 (+)


anti-RM (APIS136) (CDS_0024)
IMGVR_UViG_3300029383_000078|3300029383|Ga0243931_100134|3-41022: 10,105-35,339 (+)
anti-RM (APIS136) (CDS_0024)
IMGVR_UViG_3300014563_000169|3300014563|Ga0134418_1000091|6575-47317: 10,105-35,062 (+)
anti-RM (APIS136) (CDS_0023)
IMGVR_UViG_3300045988_145419|3300045988|Ga0495776_165648: 10,105-35,850 (+)
anti-RM (APIS136) (CDS_0024)
MGV-GENOME-0297525: 10,105-35,775 (+)
anti-RM (APIS136) (CDS_0024)
MGV-GENOME-0272911: 10,105-35,164 (+)
anti-RM (APIS136) (CDS_0027)
MGV-GENOME-0310625: 10,113-38,031 (+)
anti-RM (APIS136) (CDS_0023)
MGV-GENOME-0302018: 10,113-36,281 (+)
anti-RM (APIS136) (CDS_0022)
MGV-GENOME-0272393: 10,113-35,068 (+)
anti-RM (APIS136) (CDS_0021)
IMGVR_UViG_3300045988_117815|3300045988|Ga0495776_072160: 10,113-34,624 (+)
anti-RM (APIS136) (CDS_0021)
MGV-GENOME-0294847: 10,113-33,961 (+)
anti-RM (APIS136) (CDS_0023)
MGV-GENOME-0272827: 10,114-35,146 (+)
anti-RM (APIS136) (CDS_0021)
MGV-GENOME-0259890: 9,204-32,744 (+)
DrmMII_00003 DrmMII (CDS_0023)
anti-RM (APIS136) (CDS_0025)
Gao_Mza__MzaB (CDS_0024)
DNA helicase (CDS_0021)
IMGVR_UViG_3300029544_000103|3300029544|Ga0244921_100545: 10,113-39,280 (+)
retron_type_VI_hth_cluster2_1 (CDS_0024)
anti-RM (APIS136) (CDS_0025)
IMGVR_UViG_3300045988_166763|3300045988|Ga0495776_155101: 10,113-36,055 (+)
anti-RM (APIS136) (CDS_0023)
IMGVR_UViG_3300045988_139622|3300045988|Ga0495776_155137: 10,114-35,286 (+)
anti-RM (APIS136) (CDS_0025)
IMGVR_UViG_3300030039_000059|3300030039|Ga0242799_100347: 10,105-39,082 (+)
anti-RM (APIS136) (CDS_0026)
ivig_2260: 10,136-45,030 (+)
anti-RM (APIS136) (CDS_0025)
DNA helicase (CDS_0023)
IMGVR_UViG_3300014534_000006|3300014534|Ga0134455_100093: 10,097-40,819 (+)
anti-RM (APIS136) (CDS_0025)
MGV-GENOME-0304255: 10,112-36,722 (+)
anti-RM (APIS136) (CDS_0027)
MGV-GENOME-0311909: 10,137-43,975 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300045988_154378|3300045988|Ga0495776_135561: 10,106-37,631 (+)
anti-RM (APIS136) (CDS_0023)
IMGVR_UViG_3300014752_000071|3300014752|Ga0169821_100223|15822-56849: 10,106-35,877 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300045988_157735|3300045988|Ga0495776_094504: 10,105-37,252 (+)
anti-RM (APIS136) (CDS_0033)
MGV-GENOME-0317066: 10,106-43,279 (+)
anti-RM (APIS136) (CDS_0027)
IMGVR_UViG_2585427949_000003|2585427949|2585480615|115497-158724: 10,103-38,080 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_2879406322_000004|2879406322|2879406434|17843-61010: 10,112-38,016 (+)
drt-cluster64 DRT (CDS_0030)
anti-RM (APIS136) (CDS_0036)
amidase (CDS_0035)
IMGVR_UViG_3300029696_000234|3300029696|Ga0245263_100045|83748-132716: 10,106-43,288 (+)
anti-CRISPR-Cas (AcrIIA9) (CDS_0036)
anti-RM (APIS136) (CDS_0040)
IMGVR_UViG_3300045988_154574|3300045988|Ga0495776_134682: 10,105-43,368 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300014950_000161|3300014950|Ga0169861_100071|56089-100859: 10,105-39,090 (+)
anti-RM (APIS136) (CDS_0025)
IMGVR_UViG_3300014529_000128|3300014529|Ga0169876_100228|14474-56816: 10,106-36,662 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_2537561660_000003|2537561660|2537579428|141-42858: 10,106-37,037 (+)
anti-RM (APIS136) (CDS_0023)
MGV-GENOME-0304979: 10,106-36,255 (+)
anti-RM (APIS136) (CDS_0027)
OTU_1560: 10,106-37,644 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300045988_164115|3300045988|Ga0495776_094910: 10,106-37,398 (+)
anti-RM (APIS136) (CDS_0027)
OTU_1517: 10,106-38,037 (+)
anti-RM (APIS136) (CDS_0028)
IMGVR_UViG_3300045988_142948|3300045988|Ga0495776_095158: 10,105-37,495 (+)
anti-RM (APIS136) (CDS_0027)
MGV-GENOME-0284589: 10,105-37,414 (+)
anti-RM (APIS136) (CDS_0028)
IMGVR_UViG_3300045988_138265|3300045988|Ga0495776_055790: 10,105-37,605 (+)
anti-RM (APIS136) (CDS_0027)
IMGVR_UViG_3300045988_161303|3300045988|Ga0495776_094955: 10,105-37,414 (+)
anti-RM (APIS136) (CDS_0025)
OTU_1574: 10,106-37,540 (+)
anti-RM (APIS136) (CDS_0027)
MGV-GENOME-0283784: 10,105-37,263 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_2938060881_000008|2938060881|2938060881|11668-53525: 10,105-36,177 (+)
anti-RM (APIS136) (CDS_0029)
IMGVR_UViG_3300029034_000147|3300029034|Ga0169608_100308|174-45639: 10,105-39,785 (+)
anti-RM (APIS136) (CDS_0029)
MGV-GENOME-0293812: 10,105-38,667 (+)
anti-RM (APIS136) (CDS_0027)
IMGVR_UViG_3300029745_000287|3300029745|Ga0245251_100075|109138-153038: 10,106-38,220 (+)
Michele_1A_hits_grouped (CDS_0025)
anti-RM (APIS136) (CDS_0027)
IMGVR_UViG_3300029005_000110|3300029005|Ga0169643_100120|54487-97870: 10,106-37,703 (+)


anti-RM (APIS136) (CDS_0031)
IMGVR_UViG_3300029716_000225|3300029716|Ga0245260_1000754|10;106-42;093 (+)
drt-cluster64 DRT (CDS_0031)
anti-RM (APIS136) (CDS_0033)
IMGVR_UViG_3300045988_154760|3300045988|Ga0495776_134151|10;105-42;962 (+)
drt-cluster64 DRT (CDS_0025)
anti-RM (APIS136) (CDS_0029)
IMGVR_UViG_646206274_000004|646206274|646206535|34457-80155|9;779-40;018 (+)
anti-RM (APIS136) (CDS_0024)
IMGVR_UViG_3300028960_000073|3300028960|Ga0169754_100017|127634-168903|10;106-35;589 (+)
anti-RM (APIS136) (CDS_0025)
IMGVR_UViG_3300030096_000068|3300030096|Ga0237950_100015|213-42311|9;952-36;418 (+)
anti-RM (APIS136) (CDS_0025)
MGV-GENOME-0301496|8;106-35;715 (+)
anti-RM (APIS136) (CDS_0025)
IMGVR_UViG_3300030244_000084|3300030244|Ga0237956_100055|10650-52751|9;052-36;421 (+)
DNA transposition protein (CDS_0019)
anti-RM (APIS136) (CDS_0026)
MGV-GENOME-0280864|8;876-36;725 (+)
anti-RM (APIS136) (CDS_0026)
IMGVR_UViG_3300045988_158803|3300045988|Ga0495776_112474|9;499-36;725 (+)
anti-RM (APIS136) (CDS_0027)
MGV-GENOME-0316990|9;934-37;050 (+)
anti-RM (APIS136) (CDS_0027)
IMGVR_UViG_3300038561_000174|3300038561|Ga0111060_100164|9613-52269|10;106-36;976 (+)
Michele_1A_hits_grouped (CDS_0023)
anti-RM (APIS136) (CDS_0025)
IMGVR_UViG_3300028987_000091|3300028987|Ga0169644_100071|59872-102141|10;106-36;589 (+)
anti-RM (APIS136) (CDS_0023)
MGV-GENOME-0292175|10;106-35;338 (+)
anti-RM (APIS136) (CDS_0022)
IMGVR_UViG_3300039381_000216|3300039381|Ga0169840_100275|7652-48408|10;106-35;076 (+)
anti-RM (APIS136) (CDS_0021)
MGV-GENOME-0264231|9;197-33;514 (+)
anti-RM (APIS136) (CDS_0020)
MGV-GENOME-0261185|9;197-32;978 (+)
anti-RM (APIS136) (CDS_0022)
MGV-GENOME-0266461|9;196-33;376 (+)
anti-RM (APIS136) (CDS_0020)
MGV-GENOME-0263415|8;871-31;674 (+)
anti-RM (APIS136) (CDS_0021)
IMGVR_UViG_3300030422_000040|3300030422|Ga0237948_100123|9;052-33;716 (+)
anti-RM (APIS136) (CDS_0020)
IMGVR_UViG_3300030454_000034|3300030454|Ga0237951_100125|9;052-33;345 (+)
MGV-GENOME-0261079|10;105-32;961 (+)
IMGVR_UViG_3300045988_149114|3300045988|Ga0495776_086104|10;105-32;961 (+)
anti-RM (APIS136) (CDS_0025)
IMGVR_UViG_3300039342_000023|3300039342|Ga0169529_100014|110923-152782|9;197-36;709 (+)
anti-RM (APIS136) (CDS_0033)
Reverse transcriptase (CDS_0037)
TemPhD_cluster_34712|9;781-46;325 (+)
anti-RM (APIS136) (CDS_0030)
IMGVR_UViG_3300028998_000043|3300028998|Ga0167656_100240|10;129-42;882 (+)
single strand DNA binding protein (CDS_0031)
replication initiation protein (CDS_0028)
anti-RM (APIS136) (CDS_0035)
IMGVR_UViG_3300038705_000308|3300038705|Ga0113869_1000090|47814-95717|10;106-42;223 (+)
IMGVR_UViG_3300007305_000184|3300007305|Ga0104872_100502|9;876-41;032 (+)
anti-RM (APIS136) (CDS_0027)
IMGVR_UViG_2585427948_000003|2585427948|2585480448|58353-100420|9;495-36;918 (+)
metallo-phosphoesterase (CDS_0037)
oMTase_00015 orphan (CDS_0036)
anti-RM (APIS136) (CDS_0043)
IMGVR_UViG_3300045988_180342|3300045988|Ga0495776_026542|10;105-50;242 (+)
anti-RM (APIS136) (CDS_0037)
IMGVR_UViG_3300029490_000115|3300029490|Ga0244171_100528|10;113-46;764 (+)
anti-RM (APIS136) (CDS_0028)
MGV-GENOME-0314707|10;113-43;988 (+)
Nucleoside diphosphate kinase (VF0851) (CDS_0035)
anti-RM (APIS136) (CDS_0045)
Sigma L (VF0855) (CDS_0042)
Ton system (VF0895) (CDS_0031)
Dpd_FolE (CDS_0041)
Ton system (VF0895) (CDS_0029)
peptidase (CDS_0036)
OTU_713|10;105-54;207 (+)
anti-RM (APIS136) (CDS_0023)
tail length tape measure protein (CDS_0034)
IMGVR_UViG_3300029428_000294|3300029428|Ga0242788_100647|9759-50232|10;105-35;323 (+)
anti-RM (APIS136) (CDS_0020)
IMGVR_UViG_3300045988_143376|3300045988|Ga0495776_110828|10;105-34;591 (+)
bla_CfxA-NCBIFAM CfxA family broad-spectrum class A beta-lactamase (NF033100.1) (CDS_0031)
RM_Type_IV__FAM_2 (CDS_0030)
PDC-S02_WP_080642564.1 (CDS_0041)
anti-RM (APIS136) (CDS_0042)
IMGVR_UViG_3300006252_000062|3300006252|Ga0099396_100098|3453-61065|9;780-52;462 (+)
zinc containing alcohol dehydrogenase superfamily (CDS_0027)
Type-III-B_CnuHE (CDS_0028)
RM_Type_IV__FAM_2 (CDS_0032)
anti-RM (APIS136) (CDS_0041)
IMGVR_UViG_3300029323_000148|3300029323|Ga0243332_100218|1-62199|10;113-57;047 (+)
Reverse transcriptase (CDS_0021)
TemPhD_cluster_18126|9;196-29;319 (+)
RT_III-AM_III-B_2 (CDS_0021)
MGV-GENOME-0241816|9;196-29;793 (+)
MGV-GENOME-0247954|9;196-30;725 (+)
MGV-GENOME-0239807|9;196-29;521 (+)
RT_III-AM_III-B_2 (CDS_0021)
MGV-GENOME-0246825|9;197-30;541 (+)
MGV-GENOME-0238981|9;204-29;391 (+)
RT_III-AM_III-B_2 (CDS_0022)
MGV-GENOME-0244644|9;182-30;212 (+)
transposase (CDS_0020)
MGV-GENOME-0238771|9;195-29;362 (+)
MGV-GENOME-0244140|10;105-30;667 (+)
RT_III-AM_III-B_2 (CDS_0021)
MGV-GENOME-0252924|10;106-31;551 (+)
RT_III-AM_III-B_2 (CDS_0021)
MGV-GENOME-0255528|9;197-31;998 (+)
MGV-GENOME-0247413|10;081-30;631 (+)
MGV-GENOME-0247221|10;105-30;600 (+)
MGV-GENOME-0241905|10;105-29;807 (+)
MGV-GENOME-0258512|10;105-32;503 (+)
DNA transposition protein (CDS_0019)
MGV-GENOME-0240541|8;872-29;614 (+)


21 22 23 24 25 26 27
MGV-GENOME-0253063: 9,196-32,106 (+)
anti-RM (APIS136) (CDS_0043)
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 44 45 46 47
IMGVR_UViG_3300029545_000096|3300029545|Ga0245039_100030|175711-230611: 10,113-49,219 (+)
22 23 24 25 26 27 28 29 30 31 32 33 34 35
IMGVR_UViG_3300045988_162522|3300045988|Ga0495776_134474: 10,103-43,201 (+)
21 22 23
MGV-GENOME-0238520: 10,105-25,242 (+)
20 21 22
MGV-GENOME-0280589: 10,110-30,495 (+)
21 22 23
MGV-GENOME-0260658: 10,105-27,271 (+)
21 22 23
MGV-GENOME-0251183: 10,105-24,792 (+)
21 22 23 24 25 26
MGV-GENOME-0223671: 10,105-27,558 (+)
20 21 22 23 24
OTU_3686: 9,499-27,662 (+)
21 22 23
MGV-GENOME-0248707: 10,105-25,256 (+)
21 22 23 24 25 26 27 28 29
uvig_432191: 10,105-34,292 (+)
22 23 24 25 26 27
MGV-GENOME-0258765: 10,084-33,638 (+)
21 22 23 24 25 26 27
IMGVR_UViG_3300045988_094022|3300045988|Ga0495776_113657: 10,114-36,182 (+)
anti-RM (APIS136) (CDS_0028)
22 23 24 25 26 27 29 30 31 32 33
MGV-GENOME-0285112: 10,084-38,606 (+)
anti-RM (APIS136) (CDS_0027)
22 23 24 25 26 28 29 30 31 32
MGV-GENOME-0283295: 10,084-38,268 (+)
anti-RM (APIS136) (CDS_0027)
DNA primase (CDS_0026)
22 23 24 25 28 29 30 31 32
IMGVR_UViG_3300014803_000234|3300014803|Ga0134430_1000174|9506-53613: 10,084-39,520 (+)
anti-RM (APIS136) (CDS_0030)
22 23 24 25 26 27 28 29 31 32 33 34 35
IMGVR_UViG_3300014782_000008|3300014782|Ga0134389_1000260: 10,084-39,104 (+)
anti-RM (APIS136) (CDS_0025)
21 22 23 24 26 27 28 29 30 31
IMGVR_UViG_3300029083_000056|3300029083|Ga0169225_100004|127355-171801: 10,105-39,860 (+)
anti-RM (APIS136) (CDS_0024)
21 22 23 25 26 27 28 29 30
uvig_111310: 10,105-37,379 (+)
anti-RM (APIS136) (CDS_0026)
20 21 22 23 24 25 27 28 29 30 31
MGV-GENOME-0284667: 10,110-38,524 (+)
anti-RM (APIS136) (CDS_0025)
20 21 22 23 24 26 27 28 29 30
IMGVR_UViG_3300045988_141821|3300045988|Ga0495776_135386: 9,499-38,105 (+)
anti-RM (APIS136) (CDS_0024)
20 21 22 23 25 26 27 28 29
IMGVR_UViG_3300028579_000062|3300028579|Ga0308426_10076|78993-120796: 9,499-37,217 (+)
20 21 22 23 24
MGV-GENOME-0288036: 9,498-33,809 (+)
anti-RM (APIS136) (CDS_0021)
22 23 24 25 26 27 28
IMGVR_UViG_3300029880_000282|3300029880|Ga0245255_100043|188948-228825: 10,106-35,291 (+)
anti-RM (APIS136) (CDS_0022)
20 21 23 24 25 26 27
IMGVR_UViG_3300029371_000189|3300029371|Ga0243958_100195|43036-83346: 9,499-35,724 (+)
anti-RM (APIS136) (CDS_0023)
21 22 24 25 26 27 28 29
MGV-GENOME-0302724: 10,114-36,500 (+)
anti-RM (APIS136) (CDS_0021)
22 23 24 25 26 27
MGV-GENOME-0272184: 10,114-36,120 (+)
anti-RM (APIS136) (CDS_0035)
peptidase (CDS_0033)
22 23 24 25 26 27 28 29 30 31 32 34 36 37 38 39 40
IMGVR_UViG_3300014548_000132|3300014548|Ga0134459_100072|1-49408: 10,084-44,820 (+)
anti-RM (APIS136) (CDS_0034)
21 22 23 24 25 26 27 28 29 30 31 32 33 35 36 37 38
IMGVR_UViG_3300029331_000232|3300029331|Ga0243780_100312|1-49179: 10,105-44,028 (+)
Virulence-associated proteins (VF0679) (CDS_0041)
Orf5_00008 Orf5 (CDS_0034)
anti-RM (APIS136) (CDS_0044)
DNA helicase (CDS_0031)
drt-cluster64 DRT (CDS_0037)
UG39 (CDS_0036)
22 23 24 25 26 27 28 29 30 32 33 35 38 39 40 42 43 45 46 47 48 49
SAMN05826772_a1_ct44969_vs1: 10,105-53,749 (+)
tail length tape measure protein (CDS_0027)
terminase small subunit (CDS_0029)
PDC-S04_WP_034227615.1 (CDS_0034)
22 23 24 25 26 28 30 31 32 33 35 36
MGV-GENOME-0289803: 10,112-38,549 (+)
anti-RM (APIS136) (CDS_0042)
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 43 44 45 46 47
Ma_2019_SRR341716_NODE_206_length_59993_cov_7.079182: 10,113-54,841 (+)
anti-RM (APIS136) (CDS_0030)
PDC-S58_WP_202223243.1 (CDS_0023)
20 21 22 24 25 26 27 28 29 31 32 33 34 35
MGV-GENOME-0316530: 10,105-45,566 (+)
anti-RM (APIS136) (CDS_0030)
20 21 22 23 24 25 26 27 28 29 31 32 33 34 35
IMGVR_UViG_3300014799_000004|3300014799|Ga0134377_1000267: 10,129-45,828 (+)
Hyaluronic acid capsule (VF0244) (CDS_0024)
anti-RM (APIS136) (CDS_0031)
20 21 22 23 25 26 27 28 29 30 32 33 34 35 36
SAMN05414902_a1_ct34673_vs1: 10,129-45,323 (+)
NinG/ Rap DNA junction specific endonuclease (CDS_0023)
anti-RM (APIS136) (CDS_0032)
20 21 22 24 25 26 27 28 29 30 31 33 34 35 36 37
IMGVR_UViG_3300045988_149448|3300045988|Ga0495776_047511: 10,129-44,880 (+)
RecT-like ssDNA annealing protein (CDS_0032)
anti-RM (APIS136) (CDS_0036)
exonuclease (CDS_0033)
endonuclease (CDS_0023)
20 21 22 24 25 26 27 28 29 30 31 34 35 37 38 39 40 41
IMGVR_UViG_3300029739_000228|3300029739|Ga0245187_100079|115141-165339: 10,129-45,072 (+)
vanR-D-NCBIFAM vancomycin resistance response regulator transcription factor VanR-D (NF000404.1) (CDS_0020)
trans_reg_VanU-NCBIFAM glycopeptide resistance transcriptional regulator VanU (NF000090.1) (CDS_0021)
anti-RM (APIS136) (CDS_0022)
19 23 24 25 26
MGV-GENOME-0273770: 8,879-32,709 (+)
PrrC__EcoprrI (CDS_0014)
20 21 22 23 24
IMGVR_UViG_3300007853_000181|3300007853|Ga0114093_100295|2-40779: 8,850-35,097 (+)
22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39
IMGVR_UViG_3300045988_160045|3300045988|Ga0495776_057996: 10,081-45,009 (+)
nucleoside deoxyribosyltransferase (CDS_0036)
anti-RM (APIS136) (CDS_0043)
22 23 24 25 26 27 28 29 30 31 32 33 34 35 37 38 39 40 41 42 44 45 46 47 48
IMGVR_UViG_3300029752_000211|3300029752|Ga0243766_100125|5119-59101: 10,105-48,302 (+)
nucleoside deoxyribosyltransferase (CDS_0035)
21 22 23 24 25 26 27 28 29 30 31 32 33 34 36 37 38 39
IMGVR_UViG_3300029764_000276|3300029764|Ga0243769_100310|1-49043: 10,105-43,892 (+)
20 21 22 23 24
IMGVR_UViG_3300045988_131803|3300045988|Ga0495776_109995: 10,137-36,315 (+)
20 21 22
MGV-GENOME-0277586: 10,136-36,620 (+)
20 21 22 23 24 25 26 27
IMGVR_UViG_3300045988_172355|3300045988|Ga0495776_054380: 10,129-40,056 (+)
MTase_II_00164 Type (CDS_0023)
anti-Thoeris (APIS045) (CDS_0028)
20 21 22 24 25 26 27
IMGVR_UViG_3300045988_140898|3300045988|Ga0495776_080664|28582-74129: 10,105-40,397 (+)
20 21 22 23 24 25 26 27 28 29 30 31
MGV-GENOME-0308969: 10,137-44,410 (+)
metallo-phosphoesterase (CDS_0028)
phosphoesterase (CDS_0029)
20 21 22 23 24 25 26 27 30 31 32
MGV-GENOME-0312706: 10,129-45,802 (+)
DEDDh_I_II_III_IV_V_VI_1 (CDS_0032)
thioredoxin domain (CDS_0029)
20 21 22 23 24 25 26 27 28 30 31 33 34
MGV-GENOME-0301583: 10,137-41,965 (+)
16 17 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36
MGV-GENOME-0286276: 8,884-36,977 (+)
22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
uvig_106649: 10,105-39,044 (+)


21 22 23 24 25 26 27 28 29 30 31 32 33 35
thioredoxin domain (CDS_0034)
ribonucleotide reductase large subunit (CDS_0036)
Han_2018_ERR1398098_NODE_430_length_44748_cov_17.589645: 10,113-40,160 (+)
22 23 24 25 26 27 28 29
uvig_453172: 10,394-30,268 (+)
23 24 25 26 27 28 29
uvig_321869: 10,128-25,445 (+)
16 21 22 23 24 25 26 27
MGV-GENOME-0220976: 8,879-26,569 (+)
22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38
uvig_112055: 10,105-43,256 (+)
53 54 55 56 57 58 59 60 61
IMGVR_UViG_3300045988_167865|3300045988|Ga0495776_054556: 47,308-59,673 (+)
SigE (VF0295) (CDS_0031)
Sigma L (VF0855) (CDS_0037)
amidase (CDS_0040)
Adherence; porin (VF0713) (CDS_0041)
22 23 24 25 26 27 28 29 30 32 33 34 35 36 38 39
uvig_266196: 10,105-36,862 (+)
22 23 24 25 26 27 28 34
MGV-GENOME-0249604: 9,944-32,505 (+)
21 22 23 24 25 26
MGV-GENOME-0241589: 10,071-27,465 (+)
21 22 23 24 25 26 27
MGV-GENOME-0237851: 10,088-30,700 (+)
anti-RM (APIS136) (CDS_0027)
22 23 24 25 26 28 29 30 31 32 33 34 35
IMGVR_UViG_3300029530_000107|3300029530|Ga0244962_100034|23789-67855: 10,105-39,893 (+)
anti-RM (APIS136) (CDS_0027)
22 23 24 25 26 28 29 30 31 32 33 34 35
IMGVR_UViG_3300045988_073483|3300045988|Ga0495776_094773: 9,944-38,849 (+)
anti-RM (APIS136) (CDS_0026)
21 22 23 24 25 27 28 29 30 31 32 33 34
IMGVR_UViG_3300045988_062182|3300045988|Ga0495776_135538: 10,114-38,171 (+)
anti-RM (APIS136) (CDS_0025)
22 23 24 26 27 28 29 30 31 32 33 34
OTU_1843: 10,072-37,506 (+)
anti-RM (APIS136) (CDS_0022)
21 23 24 25 26 27 28 29 30 31
IMGVR_UViG_3300045988_101524|3300045988|Ga0495776_113534: 9,461-36,539 (+)
anti-RM (APIS136) (CDS_0029)
22 23 24 25 26 27 28 30 31 32 33 34 35 36 37
uvig_360836: 9,944-41,250 (+)
anti-RM (APIS136) (CDS_0027)
22 23 24 25 26 28 29 30 31 32 33 34 35 36 37
IMGVR_UViG_2904889873_000008|2904889873|2904889984|43881-88435: 10,111-40,326 (+)
anti-RM (APIS136) (CDS_0021)
22 23 27
IMGVR_UViG_3300045988_164516|3300045988|Ga0495776_111298: 11,414-35,414 (+)
27
MGV-GENOME-0268211: 11,414-35,414 (+)
20 21 22 23 24 25 26 27 28 29 30 31 32 33
IMGVR_UViG_3300014940_000106|3300014940|Ga0169849_100229|10639-50456: 9,179-34,723 (+)
CBASS__AG_E1_ThiF ThiF family (CDS_0027)
PDC-S01_WP_067088819.1 (CDS_0038)
unknown function (CDS_0043)
22 23 24 25 26 28 29 30 31 32 33 34 35 36 37 39 40 41 42 44
IMGVR_UViG_3300029698_000323|3300029698|Ga0245184_100127|96560-141890: 10,105-40,180 (+)
21 22 23 24 25 26 27 28 29 30 32 34 35
MGV-GENOME-0268078: 10,117-34,230 (+)
anti-RM (APIS136) (CDS_0027)
21 22 23 24 25 26 28 29 30 31
MGV-GENOME-0284787: 9,153-38,307 (+)
anti-RM (APIS136) (CDS_0023)
21 22 24 25 26 27
MGV-GENOME-0267812: 8,966-35,043 (+)
NrdD-like anaerobic ribonucleotide reductase large subunit (CDS_0022)
anaerobic ribonucleotide reductase small subunit (CDS_0023)
anti-RM (APIS136) (CDS_0024)
21 25 26 27 28 29
IMGVR_UViG_3300045988_163021|3300045988|Ga0495776_028054: 9,458-36,564 (+)
21
MGV-GENOME-0243138: 9,267-31,031 (+)
21
MGV-GENOME-0250018: 9,258-31,917 (+)
10000 nt
DNA, RNA and nucleotide metabolism
head and packaging
integration and excision
lysis
moron, auxiliary metabolic gene and host takeover
other
tail
transcription regulation
unknown function
defence (DefenseFinder)
defence (PADLOC)
virulence (VFDB)
anti-defence (dbAPIS)
AMR (AMRFinderPlus)
tRNA
pseudogene