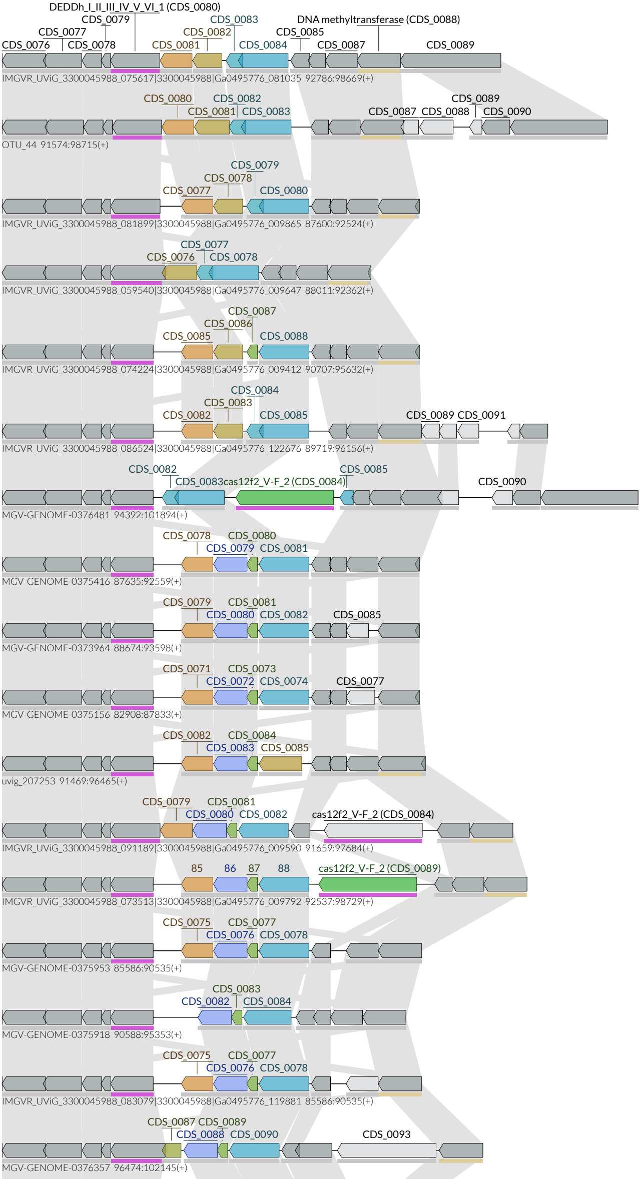
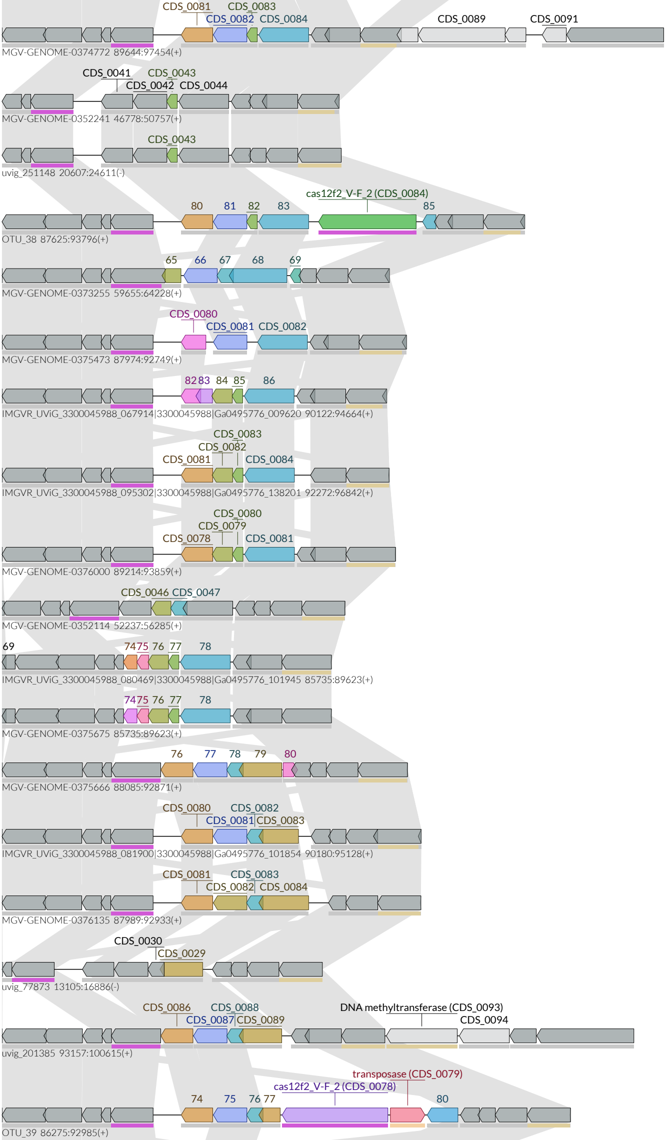
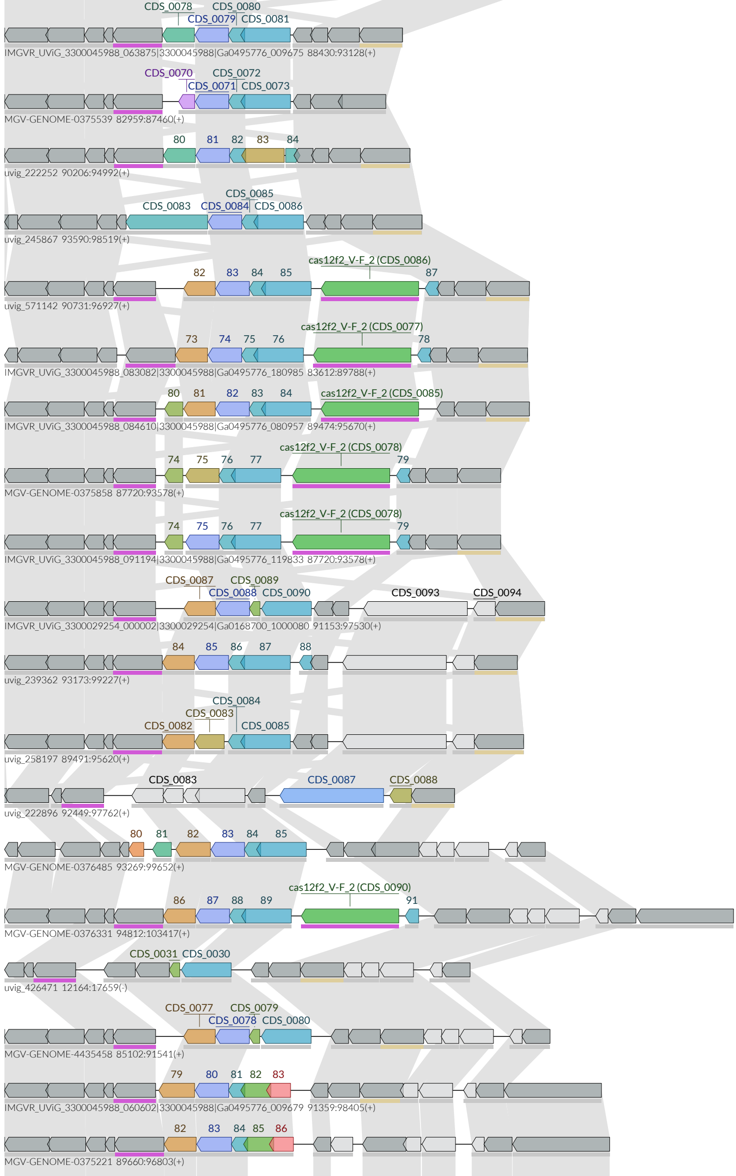
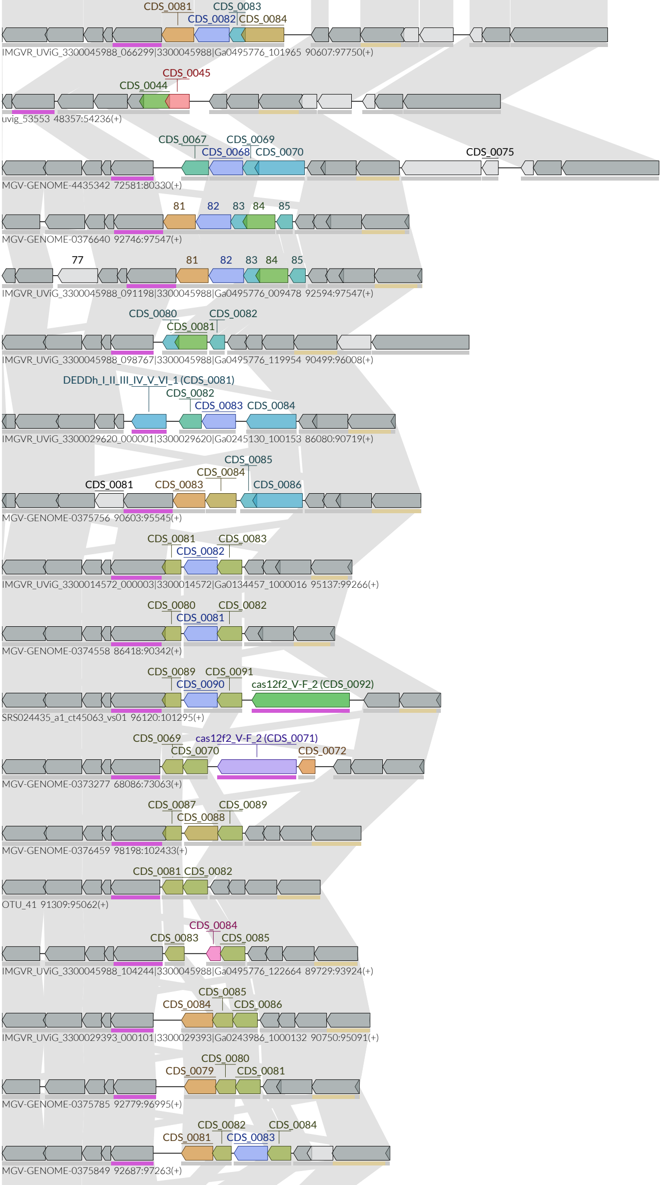
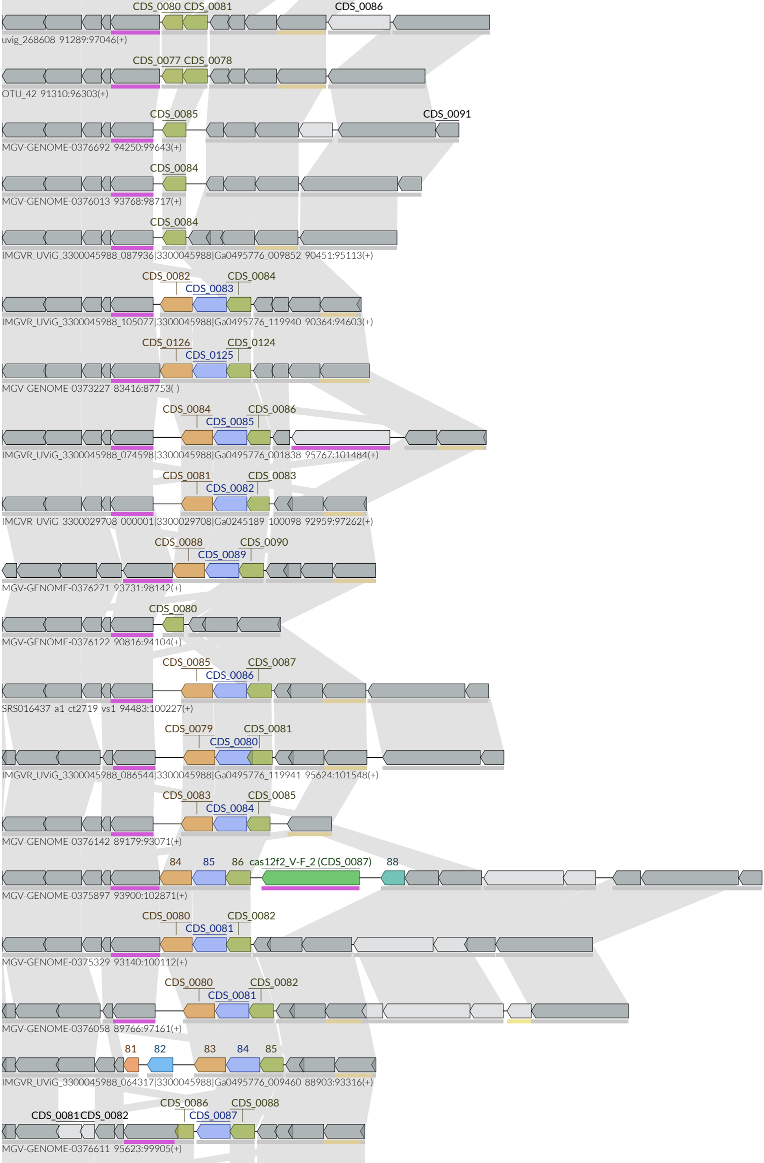
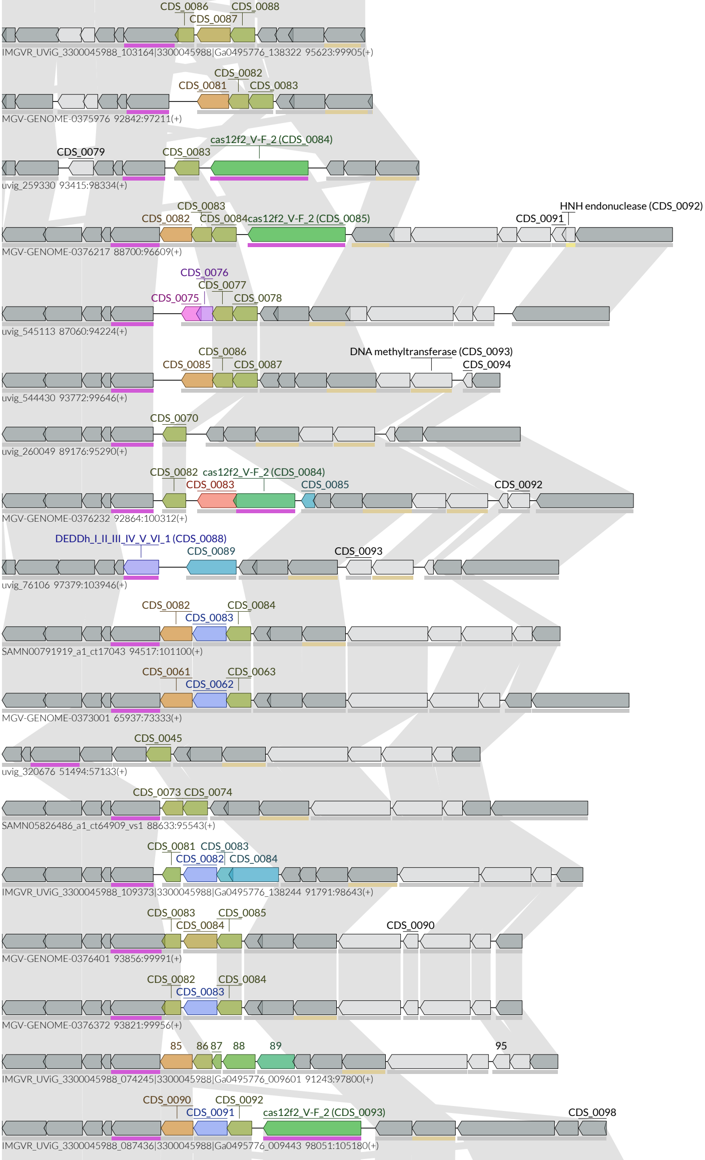

DEDDh_I_II_III_IV_V_VI_1 (CDS_0080)
CDS_0079
CDS_0083
DNA methyltransferase (CDS_0088)
CDS_0077
CDS_0082
CDS_0085
CDS_0076
CDS_0078
CDS_0081
CDS_0084
CDS_0087
CDS_0089
IMGVR_UViG_3300045988_075617|3300045988|Ga0495776_081035 92786:98669(+)
CDS_0080
CDS_0082
CDS_0089
CDS_0081
CDS_0083
CDS_0087
CDS_0088
CDS_0090
OTU_44 91574:98715(+)
CDS_0079
CDS_0078
CDS_0077
CDS_0080
IMGVR_UViG_3300045988_081899|3300045988|Ga0495776_009865 87600:92524(+)
CDS_0077
CDS_0076
CDS_0078
IMGVR_UViG_3300045988_059540|3300045988|Ga0495776_009647 88011:92362(+)
CDS_0087
CDS_0086
CDS_0085
CDS_0088
IMGVR_UViG_3300045988_074224|3300045988|Ga0495776_009412 90707:95632(+)
CDS_0084
CDS_0083
CDS_0082
CDS_0085
CDS_0089
CDS_0091
IMGVR_UViG_3300045988_086524|3300045988|Ga0495776_122676 89719:96156(+)
CDS_0082
CDS_0085
CDS_0083
cas12f2_V-F_2 (CDS_0084)
CDS_0090
MGV-GENOME-0376481 94392:101894(+)
CDS_0078
CDS_0080
CDS_0079
CDS_0081
MGV-GENOME-0375416 87635:92559(+)
CDS_0079
CDS_0081
CDS_0080
CDS_0082
CDS_0085
MGV-GENOME-0373964 88674:93598(+)
CDS_0071
CDS_0073
CDS_0072
CDS_0074
CDS_0077
MGV-GENOME-0375156 82908:87833(+)
CDS_0082
CDS_0084
CDS_0083
CDS_0085
uvig_207253 91469:96465(+)
CDS_0079
CDS_0081
CDS_0080
CDS_0082
cas12f2_V-F_2 (CDS_0084)
IMGVR_UViG_3300045988_091189|3300045988|Ga0495776_009590 91659:97684(+)
85
86
87
88
cas12f2_V-F_2 (CDS_0089)
IMGVR_UViG_3300045988_073513|3300045988|Ga0495776_009792 92537:98729(+)
CDS_0075
CDS_0077
CDS_0076
CDS_0078
MGV-GENOME-0375953 85586:90535(+)
CDS_0083
CDS_0082
CDS_0084
MGV-GENOME-0375918 90588:95353(+)
CDS_0075
CDS_0077
CDS_0076
CDS_0078
IMGVR_UViG_3300045988_083079|3300045988|Ga0495776_119881 85586:90535(+)
CDS_0087
CDS_0089
CDS_0088
CDS_0090
CDS_0093
MGV-GENOME-0376357 96474:102145(+)

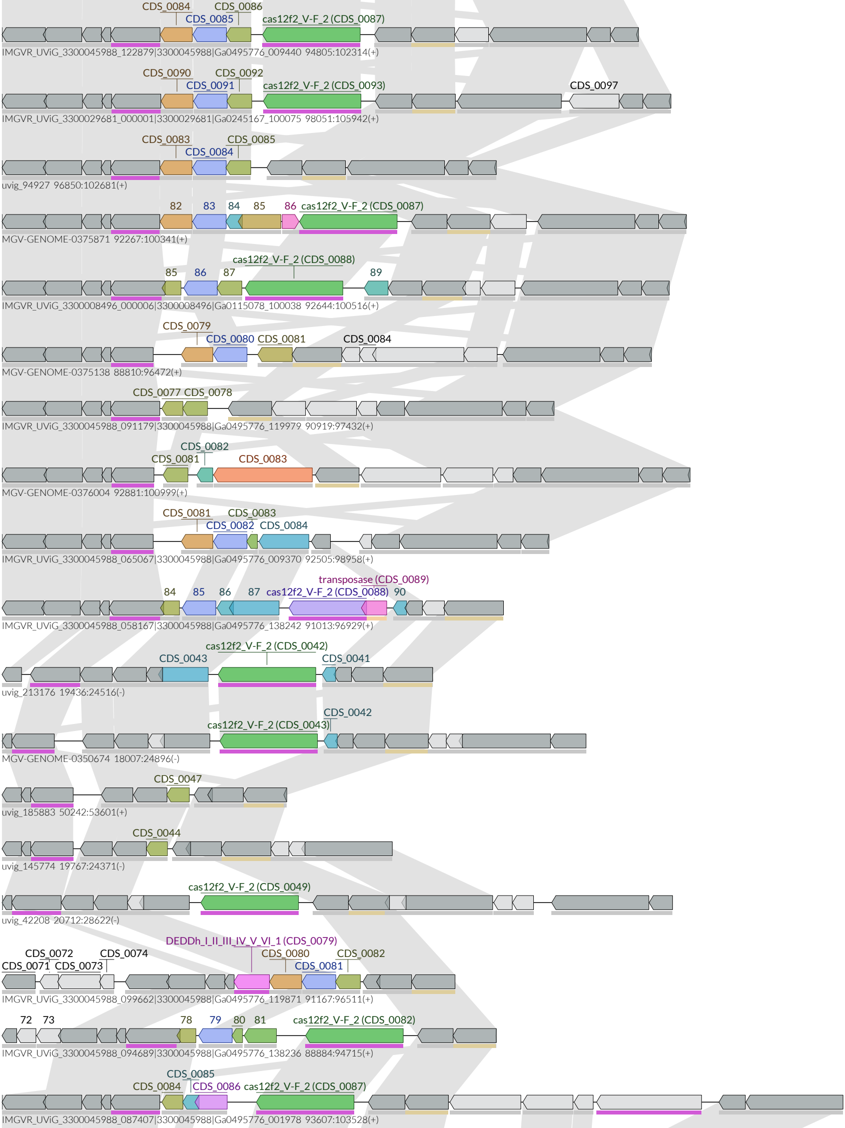

CDS_0081
CDS_0083
CDS_0082
CDS_0084
CDS_0089
CDS_0091
MGV-GENOME-0374772 89644:97454(+)
CDS_0041
CDS_0043
CDS_0042
CDS_0044
MGV-GENOME-0352241 46778:50757(+)
CDS_0043
uvig_251148 20607:24611(-)
cas12f2_V-F_2 (CDS_0084)
80
81
82
83
85
OTU_38 87625:93796(+)
65
66
67
68
69
MGV-GENOME-0373255 59655:64228(+)
CDS_0080
CDS_0081
CDS_0082
MGV-GENOME-0375473 87974:92749(+)
82
83
84
85
86
IMGVR_UViG_3300045988_067914|3300045988|Ga0495776_009620 90122:94664(+)
CDS_0083
CDS_0082
CDS_0081
CDS_0084
IMGVR_UViG_3300045988_095302|3300045988|Ga0495776_138201 92272:96842(+)
CDS_0080
CDS_0079
CDS_0078
CDS_0081
MGV-GENOME-0376000 89214:93859(+)
CDS_0046
CDS_0047
MGV-GENOME-0352114 52237:56285(+)
69
74
75
76
77
78
IMGVR_UViG_3300045988_080469|3300045988|Ga0495776_101945 85735:89623(+)
74
75
76
77
78
MGV-GENOME-0375675 85735:89623(+)
76
77
78
79
80
MGV-GENOME-0375666 88085:92871(+)
CDS_0080
CDS_0082
CDS_0081
CDS_0083
IMGVR_UViG_3300045988_081900|3300045988|Ga0495776_101854 90180:95128(+)
CDS_0081
CDS_0083
CDS_0082
CDS_0084
MGV-GENOME-0376135 87989:92933(+)
CDS_0030
CDS_0029
uvig_77873 13105:16886(-)
CDS_0086
CDS_0088
CDS_0087
CDS_0089
DNA methyltransferase (CDS_0093)
CDS_0094
uvig_201385 93157:100615(+)
transposase (CDS_0079)
cas12f2_V-F_2 (CDS_0078)
74
75
76
77
80
OTU_39 86275:92985(+)

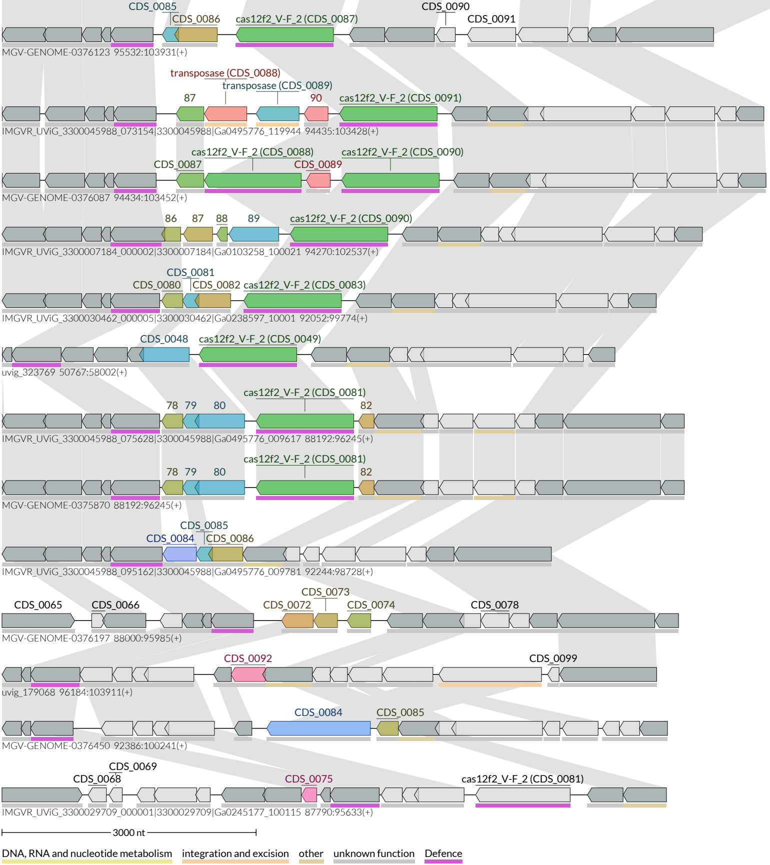

CDS_0078
CDS_0080
CDS_0079
CDS_0081
IMGVR_UViG_3300045988_063875|3300045988|Ga0495776_009675 88430:93128(+)
CDS_0070
CDS_0072
CDS_0071
CDS_0073
MGV-GENOME-0375539 82959:87460(+)
80
81
82
83
84
uvig_222252 90206:94992(+)
CDS_0085
CDS_0083
CDS_0084
CDS_0086
uvig_245867 93590:98519(+)
cas12f2_V-F_2 (CDS_0086)
82
83
84
85
87
uvig_571142 90731:96927(+)
cas12f2_V-F_2 (CDS_0077)
73
74
75
76
78
IMGVR_UViG_3300045988_083082|3300045988|Ga0495776_180985 83612:89788(+)
80
81
82
83
84
cas12f2_V-F_2 (CDS_0085)
IMGVR_UViG_3300045988_084610|3300045988|Ga0495776_080957 89474:95670(+)
cas12f2_V-F_2 (CDS_0078)
74
75
76
77
79
MGV-GENOME-0375858 87720:93578(+)
cas12f2_V-F_2 (CDS_0078)
74
75
76
77
79
IMGVR_UViG_3300045988_091194|3300045988|Ga0495776_119833 87720:93578(+)
CDS_0087
CDS_0089
CDS_0088
CDS_0090
CDS_0093
CDS_0094
IMGVR_UViG_3300029254_000002|3300029254|Ga0168700_1000080 91153:97530(+)
84
85
86
87
88
uvig_239362 93173:99227(+)
CDS_0084
CDS_0083
CDS_0082
CDS_0085
uvig_258197 89491:95620(+)
CDS_0083
CDS_0087
CDS_0088
uvig_222896 92449:97762(+)
80
81
82
83
84
85
MGV-GENOME-0376485 93269:99652(+)
cas12f2_V-F_2 (CDS_0090)
86
87
88
89
91
MGV-GENOME-0376331 94812:103417(+)
CDS_0031
CDS_0030
uvig_426471 12164:17659(-)
CDS_0077
CDS_0079
CDS_0078
CDS_0080
MGV-GENOME-4435458 85102:91541(+)
79
80
81
82
83
IMGVR_UViG_3300045988_060602|3300045988|Ga0495776_009679 91359:98405(+)
82
83
84
85
86
MGV-GENOME-0375221 89660:96803(+)


CDS_0081
CDS_0083
CDS_0082
CDS_0084
IMGVR_UViG_3300045988_066299|3300045988|Ga0495776_101965 90607:97750(+)
CDS_0045
CDS_0044
uvig_53553 48357:54236(+)
CDS_0067
CDS_0069
CDS_0068
CDS_0070
CDS_0075
MGV-GENOME-4435342 72581:80330(+)
81
82
83
84
85
MGV-GENOME-0376640 92746:97547(+)
77
81
82
83
84
85
IMGVR_UViG_3300045988_091198|3300045988|Ga0495776_009478 92594:97547(+)
CDS_0080
CDS_0082
CDS_0081
IMGVR_UViG_3300045988_098767|3300045988|Ga0495776_119954 90499:96008(+)
DEDDh_I_II_III_IV_V_VI_1 (CDS_0081)
CDS_0082
CDS_0083
CDS_0084
IMGVR_UViG_3300029620_000001|3300029620|Ga0245130_100153 86080:90719(+)
CDS_0085
CDS_0084
CDS_0081
CDS_0083
CDS_0086
MGV-GENOME-0375756 90603:95545(+)
CDS_0081
CDS_0083
CDS_0082
IMGVR_UViG_3300014572_000003|3300014572|Ga0134457_1000016 95137:99266(+)
CDS_0080
CDS_0082
CDS_0081
MGV-GENOME-0374558 86418:90342(+)
CDS_0089
CDS_0091
CDS_0090
cas12f2_V-F_2 (CDS_0092)
SRS024435_a1_ct45063_vs01 96120:101295(+)
CDS_0069
cas12f2_V-F_2 (CDS_0071)
CDS_0070
CDS_0072
MGV-GENOME-0373277 68086:73063(+)
CDS_0087
CDS_0089
CDS_0088
MGV-GENOME-0376459 98198:102433(+)
CDS_0081 CDS_0082
OTU_41 91309:95062(+)
CDS_0084
CDS_0083
CDS_0085
IMGVR_UViG_3300045988_104244|3300045988|Ga0495776_122664 89729:93924(+)
CDS_0085
CDS_0084
CDS_0086
IMGVR_UViG_3300029393_000101|3300029393|Ga0243986_1000132 90750:95091(+)
CDS_0080
CDS_0079
CDS_0081
MGV-GENOME-0375785 92779:96995(+)
CDS_0082
CDS_0084
CDS_0081
CDS_0083
MGV-GENOME-0375849 92687:97263(+)


CDS_0080 CDS_0081
CDS_0086
uvig_268608 91289:97046(+)
CDS_0077 CDS_0078
OTU_42 91310:96303(+)
CDS_0085
CDS_0091
MGV-GENOME-0376692 94250:99643(+)
CDS_0084
MGV-GENOME-0376013 93768:98717(+)
CDS_0084
IMGVR_UViG_3300045988_087936|3300045988|Ga0495776_009852 90451:95113(+)
CDS_0082 CDS_0084
CDS_0083
IMGVR_UViG_3300045988_105077|3300045988|Ga0495776_119940 90364:94603(+)
CDS_0126 CDS_0124
CDS_0125
MGV-GENOME-0373227 83416:87753(-)
CDS_0084 CDS_0086
CDS_0085
IMGVR_UViG_3300045988_074598|3300045988|Ga0495776_001838 95767:101484(+)
CDS_0081 CDS_0083
CDS_0082
IMGVR_UViG_3300029708_000001|3300029708|Ga0245189_100098 92959:97262(+)
CDS_0088 CDS_0090
CDS_0089
MGV-GENOME-0376271 93731:98142(+)
CDS_0080
MGV-GENOME-0376122 90816:94104(+)
CDS_0085 CDS_0087
CDS_0086
SRS016437_a1_ct2719_vs1 94483:100227(+)
CDS_0079 CDS_0081
CDS_0080
IMGVR_UViG_3300045988_086544|3300045988|Ga0495776_119941 95624:101548(+)
CDS_0083 CDS_0085
CDS_0084
MGV-GENOME-0376142 89179:93071(+)
84 85 86 cas12f2_V-F_2 (CDS_0087) 88
MGV-GENOME-0375897 93900:102871(+)
CDS_0080 CDS_0082
CDS_0081
MGV-GENOME-0375329 93140:100112(+)
CDS_0080 CDS_0082
CDS_0081
MGV-GENOME-0376058 89766:97161(+)
81 82 83 84 85
IMGVR_UViG_3300045988_064317|3300045988|Ga0495776_009460 88903:93316(+)
CDS_0086 CDS_0088
CDS_0081 CDS_0082
CDS_0087
MGV-GENOME-0376611 95623:99905(+)


CDS_0086
CDS_0088
CDS_0087
IMGVR_UViG_3300045988_103164|3300045988|Ga0495776_138322 95623:99905(+)
CDS_0082
CDS_0081
CDS_0083
MGV-GENOME-0375976 92842:97211(+)
cas12f2_V-F_2 (CDS_0084)
CDS_0079
CDS_0083
uvig_259330 93415:98334(+)
HNH endonuclease (CDS_0092)
CDS_0083
CDS_0082
CDS_0084
cas12f2_V-F_2 (CDS_0085)
CDS_0091
MGV-GENOME-0376217 88700:96609(+)
CDS_0076
CDS_0077
CDS_0075
CDS_0078
uvig_545113 87060:94224(+)
CDS_0086
DNA methyltransferase (CDS_0093)
CDS_0085
CDS_0087
CDS_0094
uvig_544430 93772:99646(+)
CDS_0070
uvig_260049 89176:95290(+)
CDS_0082
cas12f2_V-F_2 (CDS_0084)
CDS_0083
CDS_0085
CDS_0092
MGV-GENOME-0376232 92864:100312(+)
DEDDh_I_II_III_IV_V_VI_1 (CDS_0088)
CDS_0089
CDS_0093
uvig_76106 97379:103946(+)
CDS_0082
CDS_0084
CDS_0083
SAMN00791919_a1_ct17043 94517:101100(+)
CDS_0061
CDS_0063
CDS_0062
MGV-GENOME-0373001 65937:73333(+)
CDS_0045
uvig_320676 51494:57133(+)
CDS_0073
CDS_0074
SAMN05826486_a1_ct64909_vs1 88633:95543(+)
CDS_0081
CDS_0083
CDS_0082
CDS_0084
IMGVR_UViG_3300045988_109373|3300045988|Ga0495776_138244 91791:98643(+)
CDS_0083
CDS_0085
CDS_0084
CDS_0090
MGV-GENOME-0376401 93856:99991(+)
CDS_0082
CDS_0084
CDS_0083
MGV-GENOME-0376372 93821:99956(+)
85
86
87
88
89
95
IMGVR_UViG_3300045988_074245|3300045988|Ga0495776_009601 91243:97800(+)
CDS_0090
CDS_0092
CDS_0091
cas12f2_V-F_2 (CDS_0093)
CDS_0098
IMGVR_UViG_3300045988_087436|3300045988|Ga0495776_009443 98051:105180(+)


CDS_0084
CDS_0086
CDS_0085
cas12f2_V-F_2 (CDS_0087)
IMGVR_UViG_3300045988_122879|3300045988|Ga0495776_009440 94805:102314(+)
CDS_0090
CDS_0092
CDS_0091
cas12f2_V-F_2 (CDS_0093)
CDS_0097
IMGVR_UViG_3300029681_000001|3300029681|Ga0245167_100075 98051:105942(+)
CDS_0083
CDS_0085
CDS_0084
uvig_94927 96850:102681(+)
82
83
84
85
86
cas12f2_V-F_2 (CDS_0087)
MGV-GENOME-0375871 92267:100341(+)
cas12f2_V-F_2 (CDS_0088)
85
86
87
89
IMGVR_UViG_3300008496_000006|3300008496|Ga0115078_100038 92644:100516(+)
CDS_0079
CDS_0080
CDS_0081
CDS_0084
MGV-GENOME-0375138 88810:96472(+)
CDS_0077
CDS_0078
IMGVR_UViG_3300045988_091179|3300045988|Ga0495776_119979 90919:97432(+)
CDS_0082
CDS_0081
CDS_0083
MGV-GENOME-0376004 92881:100999(+)
CDS_0081
CDS_0083
CDS_0082
CDS_0084
IMGVR_UViG_3300045988_065067|3300045988|Ga0495776_009370 92505:98958(+)
transposase (CDS_0089)
84
85
86
87
cas12f2_V-F_2 (CDS_0088)
90
IMGVR_UViG_3300045988_058167|3300045988|Ga0495776_138242 91013:96929(+)
cas12f2_V-F_2 (CDS_0042)
CDS_0043
CDS_0041
uvig_213176 19436:24516(-)
CDS_0042
cas12f2_V-F_2 (CDS_0043)
MGV-GENOME-0350674 18007:24896(-)
CDS_0047
uvig_185883 50242:53601(+)
CDS_0044
uvig_145774 19767:24371(-)
cas12f2_V-F_2 (CDS_0049)
uvig_42208 20712:28622(-)
DEDDh_I_II_III_IV_V_VI_1 (CDS_0079)
CDS_0072
CDS_0074
CDS_0080
CDS_0082
CDS_0071
CDS_0073
CDS_0081
IMGVR_UViG_3300045988_099662|3300045988|Ga0495776_119871 91167:96511(+)
72
73
78
79
80
81
cas12f2_V-F_2 (CDS_0082)
IMGVR_UViG_3300045988_094689|3300045988|Ga0495776_138236 88884:94715(+)
CDS_0085
CDS_0084
CDS_0086
cas12f2_V-F_2 (CDS_0087)
IMGVR_UViG_3300045988_087407|3300045988|Ga0495776_001978 93607:103528(+)


CDS_0085
CDS_0086
cas12f2_V-F_2 (CDS_0087)
CDS_0090
CDS_0091
MGV-GENOME-0376123 95532:103931(+)
transposase (CDS_0088)
transposase (CDS_0089)
87
90
cas12f2_V-F_2 (CDS_0091)
IMGVR_UViG_3300045988_073154|3300045988|Ga0495776_119944 94435:103428(+)
cas12f2_V-F_2 (CDS_0088)
cas12f2_V-F_2 (CDS_0090)
CDS_0087
CDS_0089
MGV-GENOME-0376087 94434:103452(+)
86
87
88
89
cas12f2_V-F_2 (CDS_0090)
IMGVR_UViG_3300007184_000002|3300007184|Ga0103258_100021 94270:102537(+)
CDS_0081
CDS_0080
CDS_0082
cas12f2_V-F_2 (CDS_0083)
IMGVR_UViG_3300030462_000005|3300030462|Ga0238597_10001 92052:99774(+)
CDS_0048
cas12f2_V-F_2 (CDS_0049)
uvig_323769 50767:58002(+)
cas12f2_V-F_2 (CDS_0081)
78
79
80
82
IMGVR_UViG_3300045988_075628|3300045988|Ga0495776_009617 88192:96245(+)
cas12f2_V-F_2 (CDS_0081)
78
79
80
82
MGV-GENOME-0375870 88192:96245(+)
CDS_0085
CDS_0084
CDS_0086
IMGVR_UViG_3300045988_095162|3300045988|Ga0495776_009781 92244:98728(+)
CDS_0073
CDS_0065
CDS_0066
CDS_0072
CDS_0074
CDS_0078
MGV-GENOME-0376197 88000:95985(+)
CDS_0092
CDS_0099
uvig_179068 96184:103911(+)
CDS_0084
CDS_0085
MGV-GENOME-0376450 92386:100241(+)
CDS_0069
CDS_0068
CDS_0075
cas12f2_V-F_2 (CDS_0081)
IMGVR_UViG_3300029709_000001|3300029709|Ga0245177_100115 87790:95633(+)
3000 nt
DNA, RNA and nucleotide metabolism
integration and excision
other
unknown function
Defence