

# Figure S1

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>tr|A9M500|A9M500_9VIBR Phage integrase family protein.
Length = 380

Score = 115 bits (288), Expect = 5e-24, Method: Compositional matrix adjust.
Identities = 94/321 (29%), Positives = 155/321 (48%), Gaps = 15/321 (4%)

Cre : 25  KNLMDFRDRQA-FSEHTWKMLLSVCRSWAAWCKLNNRKFPAEPEDVRDYLLYLQARGL 83
      ++L++ F+ R+ +S +T + L S + WC N+R PA P+ V + + +A L
VCre: 45  EHLLNEFKKREERYSPNTRLRRLRESAWTCFVDWCLANHRHSLPATPDTVEAFFIE-RAEEL 103

Cre : 84  AVKTIQQHLGQLNMLHRRSGLPRPSDSNAVSLVMRRIRKENVDAGERAKQALAFERTDFD 143
      T+ + ++ +HR +G P P V ++ I ++ V GE KQA F
VCre: 104 HRNTLSVYRWAIISRVRVAGCPDPCLDIYVEDRLKAIARKKVRERGEAVKQASPFNEQHLL 163

Cre : 144 QVRSLEMENSDRCQDIRNLAFGLIAYNTLLRIAIEIARIRVKDISRTDGGRMLIHIGRTKTL 203
      ++ SL SD+ RNLA L +AY ++LR +E+A IRV D+ G ++ I TKT
VCre: 164 KLTSLWYRSDKLLLRNLALLAVAYESMLRASELANIRVSDMELAGDGTAILTIPTIKTN 223

Cre : 204 VSTAGVEKALSGLVTKLVERWISVSGVADDPNNYLCFVRK-NGVAAPSATSQ----- 255
      S LS V L+ + + + +LF V K N P Q
VCre: 224 HSGEPDTCILSQDVVSLMDYTEAGKLDMSDGFVGVSKHNTCIKPKKDKQTGEVLHK 283

Cre : 256 -LSTRALEGIFEATHRLIYGAKDDSGQRYLAWSGHSARVGAARDMARAGVSIPEIMQAGG 314
      ++T+ +EG+F + + D Q ++ HSARVGAA+D+ + G + +I Q+G
VCre: 284 PITTKTVEGVFYSAWETL----DLGRQGVKPFTHSARVGAADLLKGYNTLQIQQSGR 339

Cre : 315 WTNVNIVMNYIRNLDSETGAM 335
      W++ +V Y R + + GAM
VCre: 340 WSSGAMVARYGRAILARDGAM 360
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