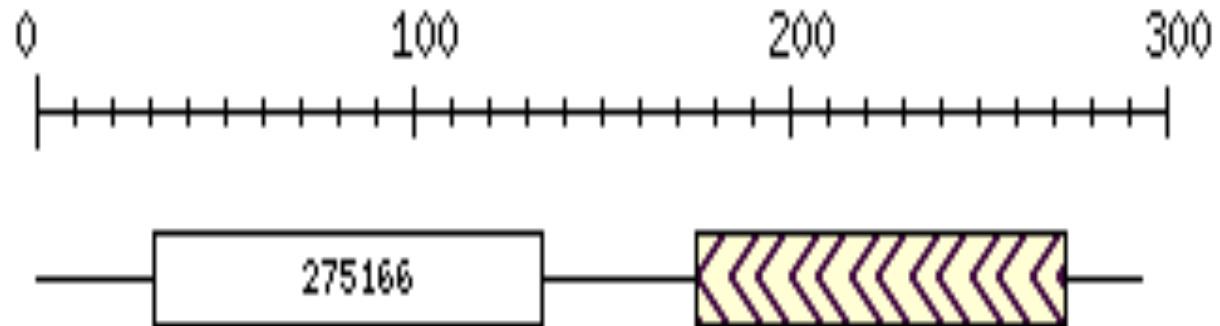


VirB9



	<u>Domain ID</u>	<u>BEGIN</u>	<u>END</u>	<u>Total ID</u>
1.	PD275166	31	133	73
2.	PD013911	175	272	76


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                10                20                30                40                50
                |                |                |                |                |
B9_A6          ---MTRKALFILACLFAAATG----AEAEDTPMAGKLDPRMRYLAYNPDQVVRLSTAVGA
B9_C58        ---MTKKAFLTLACLFLFAAIG----ARAEDTPTAGRLDPRMRYLAYNPDQVVRLSTAVGA
Riorf161_A.r  ---MIKNLFLGLVCILFVTSG----ANAEDTPAAGKLDPRMRYLAYNPDEVVHLSTAVGA
B9_M.loti     ---MTKRAFLALACSLLLTLE----ASAEDTPLAGKHDARMRYLAYRPDEVVRLSTAVGA
B9_B.qui      MMRFSKIIIFLAFLFAISCLTVP---LFAETAPVSARKDNIRFVNYDPYNVTQIIIGSIRS
B9_B.trib     MIRLLQIIIFLTFMITLGFHTVL---SFAETAPVSARKDNIRFINYDPYNVVQIIIGSIRS
B9_S.mel      ----MRTTFIATLLLTAAAPT----ALALEIPRGATQDSRVRFVDYQPNITRIIGSLRS
B9_B.mel      -----MLVRLALPGV
B9_B.suis     -----MKRFLACILITLASP---SWATKIPSGSKYDSRIQYVDYNSGDVVLVRLALPGV
Ptlf_B.p (β)  -----MMAARMMMAAGLAATALS---AHAFRIPTPGEQDARIQTVPHYHPEEVVLVRAWNGY
Tag9_A.act (γ)---MRLNMRKLLCLLLIVFGAE---TYAASTPIKSKYDDRISQSQVYNALDVTKVYAKDGF
B9_X.axon     ----MKLFNRYRVALLSALPLA---LCALSAAA-----QVVQEYEPADRIYQVRTGLGI
B9_X.camp     ----MNPFPYRAALVAALPLV---LCAFPVAS-----QVVQEYEPADRIYQVRTGLGI
B9_A.phag     MMNFYKNFYVALVTAFAFALFMSKACFASTNIGVPVSVDSRIKTFVYSQNEVFPVFNNGY
B9_E.chaf     MMNFYKIYTIILLVLMVFNS--AYAINRVDNPVTVDSRIKTFVYSNNEIYNVFNNGY
B9_W.sp       -MNMRYRILLVALLVSGNLNAS-----IN-YNEPISIDSRKTFVYSNNEVFTVFSQGY
TraH_H.i (γ)  --MMKKLIFSTLALCLFSQFAQ-----AEAVPQSTKYDRIRNVVYNPDNVTRVNVAAGA

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Prim.cons. d . r y . p . . v . . l

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                60                70                80                90
                |                |                |                |
B9_A6          TLVVTFATNETVTSVA---VSNSKDLAALPRGNLYLFFKASQV-----LTPQPV-
B9_C58        TLVVTFGANETVTAVA---VSNSKDLAALPRGNLYLFFKASKV-----LPPQPV-
Riorf161_A.r  TLVVTFGPNEAVTAVA---VSNSKDLAALPRGNLYLFFKASKV-----LPPQPV-
B9_M.loti     TLVVTFANETVAAVA---VSNSKDLAALPRANYLFFKASRI-----LPPQPV-
B9_B.qui      SVQLEFADDEEVTYVG---IGNSVAVQVAPAGHFVFLKPREV-----QPVTNL
B9_B.trib     SVQLEFADDEEVTYVG---IGNSVAVQVAPAGHFVFLKPREV-----QPVTNL
B9_S.mel      SVQVEFAPDEEIAHVA---LGNSVAWEVAPAGNIFLKPREN-----QPVTNI
B9_B.mel      GARIVFAPGENIEDVA---SGFTQGWEFKASHNILYLKARSMTLSHSNQSIDMAPEPGK
B9_B.suis     GARIVFAPGENIEDVA---SGFTQGWEFKASHNILYLKARSMTLSHSNQSIDMAPEPGK
Ptlf_B.p (β)  VTRIVFDEQEKIIDVA---AGFADGWQFSPEGNVLYIKAKSFPAQGS---AQAPEPGL
Tag9_A.act (γ)STVIFADDERILYKH---TGFKDGDITDNDNFVLKPMVAVKQSQSSEGENYFEP TPGQ
B9_X.axon     TTQVELSPNEKILDYS---TGFTGGWELTRRENVFYLK-----PKNVD
B9_X.camp     TTQIELSPNEKILDYS---TGFTGGWELTRRENVFYLK-----PKNVD
B9_A.phag     HSYIEFSQGETVRVMA---LGDANANWKIRPVDNKLYVMPEK-----EG
B9_E.chaf     HSYIEFSKGETIKMLA---MGNTVSWKVKPVGKLFIMPEK-----NG
B9_W.sp       YSYIEFAEGEKVKNIA---VGDASSWKINPYDNKLLIMPFEV-----SS
TraH_H.i (γ)  ATLLQFHPNEFISEVEGGLGLGDAKAWAVNVKGNNIWIKP-----IAVE

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Prim.cons. . . . v . f . . . E . v s n . l . f k p

	100	110	120	130	140
B9_A6	IVLTASDSGMRR-YV-FS	ISSKTL	SHLDKE--Q-----	PDL	YYSVQFAYPADDA
B9_C58	VVLTASDAGMRR-YV-FS	ISSKTL	PHLDKE--Q-----	ADL	YYSVQFAYPADDA
Riorf161_A.r	IVLTASDAGMRR-YV-FS	LATRTMSRLDKE--Q-----		PDL	YYSVQFTYPADVAA
B9_M.lot1	VVLADSESGTR-YV-FS	ISTRAMPKLDEQ--Q-----		PDL	YYSVQFTYYPGDEAA
B9_B.qui	QIVTSRQDGTKRSYQ-FEL	KFVKATFHR-----		RY	YFLVSFVIQKN--F
B9_B.trib	QIVTSRQDGTKRSYQ-FEL	QIREGDVSAG---N-----		ET	YFLVKFRYPEDEAL
B9_S.mel	SVVTTTRRDGSTRSYQ-MEL	TVRDGKVEVG---Q-----		NT	YFYVKYRYPADAEAE
B9_B.mel	WDTNLMVTTDQRMVD-FDL	RMLPGRNNQ-----		RV	YRVQF---RYPAA
B9_B.suis	WDTNLMVTTDQRMVD-FDL	RMLPGRNNQ-----		RV	YRVQF---RYPAA
PtlF_B.p (β)	WNTNLLVKTDRRLYD-FDL	VLASADAATPQALQR-----		SR	MYRLQF---RYPAA
Tag9_A.act (γ)	WNTNLFINTNKRTYS-FDL	LIVPENSTSS---YQ-----		VN	FSPTEK---QKQLAA
B9_X.axon	VDTNMMIRTATHSYI-LEL	KVVATDQWRLQAKQ-----		AG	VQYKVVFTYPKDTSF
B9_X.camp	VDTNMMIRTATHSYI-LEL	KVVATDQWRLQAKQ-----		AG	VQYKVVFSYPKDTSF
B9_A.phag	HTNMLIETSKGRSYAFDL	LISTAIPLSGGAASSINKL	GKTNSALADLAVVRFYYPQSDRN		
B9_E.chaf	RTNMLIETNKGRSYA-FDL	ICR---SANESSDDNNDQAG	YSDLIDLTYIVRFYYPKTEED		
B9_W.sp	RTNMIITTTKKRNYI-FDL	ISRPNYDKYPDTDAKKVDH	DYSAEKDISYVVRFYYPQEEGE		
TraH_H.i (γ)	PDTNLTIVTNKRTYL-FNL	VSVKN--R-----		NS	YWGIRFSYPDMQKA

Prim.cons.r.Y.f.....y.v.f.yf.....

	150	160	170	180	190
B9_A6	ARRREAQ-----RAV	VDRLRH---AEAQYQ	RKAEDLLDQPV	TALGATDSNWHYVAQGD	RS
B9_C58	APQKAAQE-----KAV	ADRIR---AEAQYQ	RAEGLLEQPAT	TVGAEDKNWHYVAQGD	RS
Riorf161_A.r	ARRKEAEQ-----RDL	ADRMR---AQAQYQ	RAEDLLERPP	PAGGSTDAKNWSYVAQGD	RS
B9_M.lot1	ALRQAAEK-----RS	ILGAR---AKVQEQ	RVQDLLNRPG	TASSDESNFHYVAKGD	RS
B9_B.qui	AQKLAKAA-----EAA	QREEN---FVNDV	FNIHENFGPR-----	NWAYE	AQGSSL
B9_B.trib	RKKLAEAA-----KAE	QREEN---FVNDI	LNIHEDFGPR-----	NWAYE	AQGSSL
B9_S.mel	RRRQAAAA-----RA	IQAQAK---EADNV	LAIHEAYGPR-----	NWRY	SAQGAQA
B9_B.mel	AAAAAVAA-----AQ	KRVVQAR---MNAR	PSPVNWN	NYTMQ-----	VGTNSAS
B9_B.suis	AAAAAVAA-----AQ	KRVVQAR---MNAR	PSPVNWN	NYTMQ-----	VGTNSAS
PtlF_B.p (β)	PQAASRAS-----P	VGPAVPA-----	GALNRRYAMQ-----		VGN
Tag9_A.act (γ)	QRQKNKRE-----RE	QQAIEKS---LQ	STKPKNWDYVMK-----		VKAGSET
B9_X.axon	NNVADADT-----S	KNGPLLNA---KIL	KDRRYDYDYA-----		TRTKKSW
B9_X.camp	NNGEDAAA-----A	KNGPLLNA---KIL	KDRLYDYDYA-----		TRTKKSW
B9_A.phag	FDIMGQKL-EIS	PPSLASSLDADD	VEIEPNATR	TNYMFTG-----	G-SAHVS
B9_E.chaf	FELNQVKLPDIS	VPSAVQKIKK-HV	VIKPNNTS	NHYILET-----	K-SENQN
B9_W.sp	FDVDLDEV---SL	PQMQYTTDKLE	KIIQENDTK	YNYTYID-----	E-GGNAD
TraH_H.i (γ)	PINPWARP-----C	QG-----G	TNYRYFVQ-----		GEEKDKK

Prim.cons.

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                200      210      220      230      240
                |        |        |        |        |
B9_A6           LLPLEVFDNGFTTVFHFP----GNVRIPSIY TINPD-GKEAVANYSVKG----SDVEISS
B9_C58          LLPLEVFDGFTTVFHFP----GNVRIPSIY TINPD-GKEAVANYSVKG----SYVEISS
Riorf161_A.r   LLPLEVFDNGYSTTFRFP----GNVRVPSIYVINPD-GKEATANYSVKG----DYVEVAS
B9_M.loti      LAPLQVFDNGFTTVFGFA----SNSRIPSLYIINPD-GKEAANFTVKG----DYVEVSA
B9_B.qui       IEPASVYDNGKTTTFTFL----GNTEIPAIYLVSLD-GQESLVPKSIKG----NKVIVHA
B9_B.trib      IEPTSVDYDNGKTTTFTFL----GNVEIPTIYLVTPD-GQESLIPKSIKG----NQVIVHA
B9_S.mel       LEPQSVYDNGKVTTFAFV----GNQEMPAIYIENS D-GSES LVPKSV DG----NLVLVHA
B9_B.mel       IAPTLAYDDGRFTYLRFP----NNRDFPAAFLVAED-KSESIVNSHIDP-SAPDILVLHR
B9_B.suis      IAPTLAYDDGRHTWLTFR----NNRDFPAAFLVAED-KSESIVNSHIDP-SAPDILVLHR
PtlF_B.p (β)   IAPIAAYDDGRHTWLTFR----PGQFPFAVFAVAPD-GTETLVNLHID--NQS--LVIHR
Tag9_A.act (γ)ITPNYAYDDGIFTYLGFA----PNKTFPAAFLEGG--STESLLNTNVKQDGN YQV LVIQK
B9_X.axon      LIPSRVYDDGKFTYINMDLTRFPTGNFPVAVFAREKEHAEDFLVNTTVEG----NTLIVHG
B9_X.camp      LVPSRVYDDGKFTYINMDLTRFPTGNFPVAVFAREKEHSEDFLVNTTVEG----NTLIVHG
B9_A.phag      LAPTQAFDDGYLTYFQFG---KNNKEIPKIYVVKKDGK KVPCKMLLLRD-----YVIVEG
B9_E.chaf      ILPVELFDDGKLT YFKFS---NDNQIIPQIFIYNNSEKKVPCKMLLLQN-----YVIKIG
B9_W.sp        IVPIELFDDGYLTYLKF R---NNNK-IPQVFVEGEDK---PCKRLLFDD-----YVIKIG
TraH_H.i (γ)   IFPLEAWDNGTFTCFKFP----IGNDLPIVIFKKLPD-GKEGLVNSHVEN-----DYIVIH E

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Prim.cons. l.P...fDnG...T.f.f.....iP..y.....v.....v.i..

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                250      260      270      280      290
                |        |        |        |        |
B9_A6           VSRGWRLRDGH-TVLCIWNAAYPDVGQR PQTGT VVRPDVKRVLKGAGK---
B9_C58          VSRGWRLRDGH-TVLCIWN TAYDPVGR RPETGT VVRPDVKRVLKEVRG---
Riorf161_A.r   VSREWRLRDGH-TVLCIWNKAYDAVGRKPGTGT VVRPDVVRVLKETR---
B9_M.loti      VAREWRLRDGN-TVLSIFNRAYDPVGRAPGTGT VVRPDVVRVLKSGR---
B9_B.qui       IAAQFTLRRGN-DVLCIFNKRFVPEGINPETGTTSPSVQRRVNI GNH EG
B9_B.trib      TAAQFTLRRGN-EVLCIFNKRFVPEGINPETGTTSPSVKRKVNIGNSHE-
B9_S.mel       ISRKFILRRGG-DVLCVFNEAYDRVGINPDTSTTSPSVERIVRIDAGAVQ
B9_B.mel       VAKQMVLRRLGN-KVIGIYNESFNPDGVPARDGTTVPRVKRVIKSPGENLQ
B9_B.suis      VAKQMVLRRLGN-KVIGIYNESFNPDGVPARDGTTVPGVKRVIKSPGENLQ
PtlF_B.p (β)   VAPVLM LRS GA-SVIRIVNQNGDASESPA FECHAEPAL-----
Tag9_A.act (γ)TAEKLVLRSGE-KVVG IYNQSYG-KTPV TYNTTISP NVARDER-----
B9_X.axon      TYPFLVVRHGD-NVVGLRRNKQK-----
B9_X.camp      TYPFLVVRHGD-NVVGLRRNKQK-----
B9_A.phag      VHEL FYLDFGDGRSVEVVNQALS-----
B9_E.chaf      VHKNLYLEYKS-ESVKITNKKL-----
B9_W.sp        VHKKLFMRYED-GEVEIINRSL-----
TraH_H.i (γ)   INDEYRIRLGD-LVVG VKTNKLKARPTT NATTNGKTRE AIDE-----

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Prim.cons. lr.g....lci.....

<http://npsapbil.ibcp.fr/cgi-bin/alignclustalw.pl>