(D)

```
                         10        20        30        40        50        60        70        80
                          |         |         |         |         |         |         |         |
Lmajor_LPG3        MANSSLLRVVLVALLLLGSVTVSAGDGRGTPIAFQAEVSKMLDILVNSLYTNRAVFLRELISNGSDALDKIRVLYLTSPK
Linfantum_LPG3     MANSSLLRVVLVALLLLGSVTVSAGDGRGTPIAFQAEVSKMLDILVNSLYTNRAVFLRELISNGSDALDKIRVLYLTSPK
Ltarentolae_LPG3   MTNTRLLNVVLVALLLLGSVTVSAGDGRGTPITFQAEVSKMLDILVNSLYTNHAIFLRELISNGSDALDKIRVLYLTSPK
Lbraziliensis_LPG3 MANSNVHRVVLVALLLLGSVTVSAGDARGSPITFQAEVSKMLDILVNSLYTNHAVFLRELISNGSDALDKIRVLYLTSPK
                   *:*: : .******************.**:**:********************:*:*************************

                         90       100       110       120       130       140       150       160
                          |         |         |         |         |         |         |         |
Lmajor_LPG3        EPLTKDGEAPTMDLRISFDKEKSELILRDGGVGMTKEELAKHLGSLGTSGTKHFLEKLQEGVGAGGGDQNNLIGQFGVGF
Linfantum_LPG3     EPLTKDGEAPTMDLRISFDKEKSELILRDGGVGMTKEELAKHLGSLGTSGTKHFLEKLQEGVGAGGGDQNNLIGQFGVGF
Ltarentolae_LPG3   EPLTKDGEAPTMDIRISFDKEKNALILRDGGVGMTKEELATHLGSLGTSGTKNFLEKLQEGVSAAGGDQNNLIGQFGVGF
Lbraziliensis_LPG3 EPLTKDGETPTMDLRISFDNENHELILRDGGIGMTKEELTQHLGSLGSSGTKHFLEKLQEGSGAVGGDQSNLIGQFGVGF
                   ********:****:*****:*:  *******:*******: ******:****:******** .* ****.**********

                        170       180       190       200       210       220       230       240
                          |         |         |         |         |         |         |         |
Lmajor_LPG3        YSVFLVGDRVRVASKSDDSDEQYVWESKGDGQYFLYPDPRGNTLGRGTEITIELKPDAEQFLSAETIKKTIHQYSEFINF
Linfantum_LPG3     YSVFLVGDRVRVASKSDDSDEQYVWESKGDGQYFLYPDPRGNTLGRGTEITIELKPDAEQFLSAETIKKTIHQYSEFINF
Ltarentolae_LPG3   YSVFLVGNRVRVASKSDNSDEQYVWESKGDGQYFLYVDPRGNTLGRGTEITIELKPDSEEFLSAETIKKTIHQYSEFINF
Lbraziliensis_LPG3 YSVFLVGNRVRVASKSDDSDEQYVWESKGDGEYFLYPDPRGNTLGRGTEITIELKPEDQEFLSAETIKKTIHQYSEFINF
                   *******:*********:*************:**** ********************: ::********************

                        250       260       270       280       290       300       310       320
                          |         |         |         |         |         |         |         |
Lmajor_LPG3        PIYVQEEVEVASTAAT--PEPAAEEGSLDEGAVEEDSDKEGGTQGVAKERRWVLVNENRPIWTRPIGNVTEEEYHKFYKA
Linfantum_LPG3     PIYVQEEVEVASTAAT--PEPAAEEGSLDEGAVEEDPDKEGDTQGVVKERRWTLVNENRPIWTRPIGNVTEEEYHTFYKA
Ltarentolae_LPG3   PIYVQEEVEVTSTAET--PESAEEEGSPDKDTVEEDSNKKGDKQTVVKEKRWTLVNENRPIWTRPIGNVTEEEYHKFYKG
Lbraziliensis_LPG3 PIYVQEEVEVKPKTEIRTSEPGAEVGFMKEVVVEEDNN--GEEKVPRMEKRWTLINENRPIWTRQIGNVTEEEYIKFYKA
                   ********** ..:    .*.. * *  .: .**** :  *  :    *:**.*:********* ********* .***.

                        330       340       350       360       370       380       390       400
                          |         |         |         |         |         |         |         |
Lmajor_LPG3        FSGDYRDPLYFSHFKVEGEVDFDSILFVPTTVDPASFSDDNAAPNTNIKLYVRRVFITDEFRDLLPRYLNFVKGIVDSND
Linfantum_LPG3     FSGDYRDPLYFNHFKVEGEVDFDSILFVPTTVDPASFSDDNSVPNTNIKLYVRRVFITDEFRDLLPRYLNFVKGIVDSND
Ltarentolae_LPG3   FSGDYRDPLYFNHFKVEGEVDFDSILFVPATVDPALFDDTNTAPNTNIKLYVRRVFITDEFRDLLPRYLNFVKGIVDSND
Lbraziliensis_LPG3 FSGDYRDPLYFSHFKVEGEVDFDSILFIPSTVDPASFSDDKANPSTNIKLYVRRVFITDEFRDLLPRYLNFVKGIVDSND
                   ***********.****************:*:***** *.* :: *.************************************

                        410       420       430       440       450       460       470       480
                          |         |         |         |         |         |         |         |
Lmajor_LPG3        LPLNVSREVLQESRILRVIKKKLVRKTLSMFADIAAQDEAIADGKQVENPALSGHTHLKKPAYTKFWELYGKHLRLGVML
Linfantum_LPG3     LPLNVSREVLQESRILRVIKKKLVRKTLSMFADIAAQDEAIANGKQVESPAPSGHTHLKKPAYTKFWELYGKHLRLGVML
Ltarentolae_LPG3   LPLNVSREVLQENRILRVIKKKLVRKTLSMFAEIAAQDEAIANGKQEENPEPSGHTHLKEPTYTKFWEMYGKHLRLGAVM
Lbraziliensis_LPG3 LPLNVSREVLQESRILRVIKKKLVRKALNMFANIAAQDVEIANKDHAEDPAPSGHTHLKKPTYAKFWDLFGKHLRLGAIT
                   ************.**************:*.***:*****  **: .: *.*  *******:*:*:***:::*******.:

                        490       500       510       520       530       540       550       560
                          |         |         |         |         |         |         |         |
Lmajor_LPG3        DSNNRNRLTKLFRYKSSRSESEYISLQTYVDRMKKGQKGIYYLSGDSVARIKKSPVLEDAVNHDVEVIFMTDAIDEYVVS
Linfantum_LPG3     DSNNRNRLTKLFRYKSSRSESEYISLQTYVDRMKKGQKGIYYLSGDSVARIKKSPVLEDAVNHDVEVIFMTDAIDEYVVS
Ltarentolae_LPG3   DSNNRNRLSKLYRYKSSRSEDKYISLQTYVDRMKKGQKGIYYLSGDSVERIKKSPVLEDAVNHDVEVIFMTDAIDEYVVS
Lbraziliensis_LPG3 DSNNRNRLMKLFRYKSSASETEYISLQAYVDRMKKGQKGIYYLSGDSVDRIKKSPVLEDALNHGFEVIFMTDPIDEYAVS
                   ******** **:***** ** :*****:******************** ***********:**..*******.****.**

                        570       580       590       600       610       620       630       640
                          |         |         |         |         |         |         |         |
Lmajor_LPG3        QLTDFAGKKLINLAKEGVQFEESDARQRVADRKRKEKYDSFFTHLRVLFGYSEVRKVILTKRMTNEAFIVSSGENQITAR
Linfantum_LPG3     QLTDFAGKKLINLAKEGVQLEESDARQRVADRKRKEKYDSFFTHLRALFGYSEVRKVILTKRMTNEAFLVSSGENQITAR
Ltarentolae_LPG3   QMTDFSGKKLINLAKEGVQFEESDARQRVVDRKRKEKYDAFFTHLRKLFGYLEVRKVIMTKRMTNEAFIVSSSENQVTAR
Lbraziliensis_LPG3 HLTDFAGNKLINLAKEGVAFEETDSRQRVVDKKRREKYNSLFTHLRGIFGYSEVRKVILTRRMTNEAFIVSSGDNQITAR
                   ::***:*:********** :**:*:****.*:**:***:::***** :*** ******:*:*******:***.:**:***

                        650       660       670       680       690       700       710       720
                          |         |         |         |         |         |         |         |
Lmajor_LPG3        LASIMRGQSMSLANQQMTAERVLEVNYRHPLVDEMFKRFTVDENDEVATDIAWVLYDTANLQAEFPVADVAAYSKRINRL
Linfantum_LPG3     LASIMRGQSMSLANQQMTAERVLEVNYRHPLVDEMFKRFTVDEDDEVATDIAWVLYDTANLQAEFPVADVAAYSKRINRL
Ltarentolae_LPG3   LASIIRGQSMSPSDEQMSAERVLEVNYRHPLVDEMFKRFTVNEDDEVAIDIAWVLYDTANLHAEFPVADVAAYSKRINRL
Lbraziliensis_LPG3 LASIMRGQSMSLADQKVTAERVLEVNYRHPLVDEMFKRFTVNEDDEVATDIAWVLYDTANLQAEFPVADVAAYAKRINRL
                   ****:****** ::::::************************:*:**** ************:************:******

                        730       740       750       760       770       780       790       800
                          |         |         |         |         |         |         |         |
Lmajor_LPG3        LRSSVDLSADDSLLPPDDAEYTVSDTEAEEEEEQPKVDANADEKAEAVDEGDL--------------------------
Linfantum_LPG3     LRSSVDLSADDSLLPPDDAEYTVSDTEAEEEEEQPKVDANADEEAEAVGEDDLQASRPTLSPPPGAPRRLGHRTIAIVAV
Ltarentolae_LPG3   LRSSVDLSADDSLLPPDDAEYTVSNTEAEEEKEQPKV-------------------------------------------
Lbraziliensis_LPG3 LRSSVDLNADDSLLPPDDDEYTVFDTETEEEKPTNDADASETTGADSDGDL-----------
                   *******.********** **** :**:***:   ..

                        810
                          |
Lmajor_LPG3        ---------------
Linfantum_LPG3     ASALLATRLSERQLQ
Ltarentolae_LPG3   ---------------
Lbraziliensis_LPG3 ---------------
```