```
           1        10        20        30        40        50        60        70        80
Consensus  MATSPPGVLASVAVCEESPGSSWKAGAFERAYVAFDPSLLALNEALCAELLTASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD
Identity

1. 17v2|UL32   MATSPPGVLASVAVCEESPGSSWKAGAFERAYVAFDPSLLALNEALCAELLTASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD
2. F|UL32      MATSPPGVLASVAVCEESPGSSWKAGAFERAYVAFDPSLLALNEALCAELLTASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD
3. H129|UL32   MATSPPGVLASVAVCEESPGSSWKAGAFERAYVAFDPSLLALNEALCAELLTASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD
4. KOS|UL32    MATSPPGVLASVAVCEESPGSSWKAGAFERAYVAFDPSLLALNEALCAELLAASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD
5. McKr|UL32   MATSPPGVLASVAVCEESPGSSWKAGAFERAYVAFDPSLLALNEALCAELLTASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD
6. HF10|UL32   MATSPPGVLASVAVCEESPGSSWKAGAFERAYVAFDPSLLALNEALCAELLTASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD
7. CR38|UL32   MATSPPGVLASVAVCEESPGSSWKAGAFERAYVAFDPSLLALNEALCAELLTASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD
8. E03|UL32    MTTSPPGVLASVAVCEESPGSSWKAGVFERAYVAFDPSLLALNEALCAELLTASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD
9. E06|UL32    MATSPPGVLASVAVCEESPGSSWKAGAFERAYVAFDPSLLALNEALCAELLTASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD
10. E07|UL32   MATSPPGVLASVAVCEESPGSSWKAGAFERAYVAFDPSLLALNEALCAELLTASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD
11. E08|UL32   MATSPPGVLASVAVCEESPGSSWKAGAFERAYVAFDPSLLALNEALCAELLTASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD
12. E10|UL32   MATSPPGVLASVAVCEESPGSSWKAGAFERAYVAFDPSLLALNEALCAELLTASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD
13. E11|UL32   MATSPPGVLASVAVCEESPGSSWKAGAFERAYVAFDPSLLALNEALCAELLTASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD
14. E12|UL32   MATSPPGVLASVAVCEESPGSSWKAGAFERAYVAFDPSLLALNEALCAELLTASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD
15. E13|UL32   MTTSPPGVLASVAVCEESPGSSWKAGAFERAYVAFDPSLLALNEALCAELLTASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD
16. E14|UL32   MATSPPGVLASVAVCEESPGSSWKEGAFERAYVAFDPSLLALNEALCAELLTASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD
17. E15|UL32   MATSPPGVLASVAVCEESPGSSWKAGAFERAYVAFDPSLLALNEALCAELLTASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD
18. E19|UL32   MATSPPGVLASVAVCEESPGSSWKAGAFERAYVAFDPSLLALNEALCAELLTASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD
19. E22|UL32   MATSPPGVLASVAVCEESPGSSWKAGAFERAYVAFDPSLLALNEALCAELLTASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD
20. E23|UL32   MATSPPGVLASVAVCEESPGSSWKAGAFERAYVAFDPSLLALNEALCAELLTASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD
21. E25|UL32   MATSPPGVLASVAVCEESPGSSWKAGAFERAYVAFDPSLLALNEALCAELLTASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD
22. E35|UL32   MATSPPGVLASVAVCEESPGSSWKAGAFERAYVAFDPSLLALNEALCAELLTASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD
23. R11|UL32   MATSPPGVLASVAVCEESPGSSWKAGAFERAYVAFDPSLLALNEALCAELLTASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD
24. R62|UL32   MATSPPGVLASVAVCEESPGSSWKAGAFERAYVAFDPSLLALNEALCAELLTASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD
25. S23|UL32   MATSPPGVLASVAVCEESPGSSWKAGAFERAYVAFDPSLLALNEALCAELLTASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD
26. S25|UL32   MATSPPGVLASVAVCEESPGSSWKAGAFERAYVAFDPSLLALNEALCAELLTASHVIGVPPVGTLDEDVAADVVTAPSRARGGAGD

              90        100       110       120       130       140       150       160       170
Consensus  GGGSGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA
Identity

1. 17v2|UL32   GGGSGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA
2. F|UL32      GGGSGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA
3. H129|UL32   GGGSGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA
4. KOS|UL32    GGGSGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA
5. McKr|UL32   GGGSGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA
6. HF10|UL32   GGGSGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA
7. CR38|UL32   GGGSGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA
8. E03|UL32    GGGSGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA
9. E06|UL32    GGGSGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA
10. E07|UL32   GGGSGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA
11. E08|UL32   GGGSGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA
12. E10|UL32   GGGSGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA
13. E11|UL32   GGGSGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA
14. E12|UL32   GGGSGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA
15. E13|UL32   GGGSGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA
16. E14|UL32   GGGSGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA
17. E15|UL32   GGGSGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA
18. E19|UL32   GGGSGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA
19. E22|UL32   GGGSGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA
20. E23|UL32   GGGSGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA
21. E25|UL32   GGGSGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA
22. E35|UL32   GGGSGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA
23. R11|UL32   GGGSGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA
24. R62|UL32   GGGLGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA
25. S23|UL32   GGGSGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA
26. S25|UL32   GGGSGGRGGPRNPPPDPCGEGLLDTGPFSAAAIDTFALDRPCLVCRTIELYKQTYRLSPQWVADYAFLCAKCLGAPHCAASIFVAA

                180       190       200       210       220       230       240       250
Consensus  FEFVYVMDRHFLRTKKATLVGSFARFALTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLAQSATRALI
Identity

1. 17v2|UL32   FEFVYVMDRHFLRTKKATLVGSFARFALTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLAQSATRALI
2. F|UL32      FEFVYVMDRHFLRTKKATLVGSFARFALTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLAQSATRALI
3. H129|UL32   FEFVYVMDRHFLRTKKATLVGSFARFALTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLAQSATRALI
4. KOS|UL32    FEFVYVMDRHFLRTKKATLVGSFARFALTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLAQSATRALI
5. McKr|UL32   FEFVYVMDRHFLRTKKATLVGSFARFALTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLAQSATRALI
6. HF10|UL32   FEFVYVMDRHFLRTKKATLVGSFARFVLTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLVQSATRALI
7. CR38|UL32   FEFVYVMDRHFLRTKKATLVGSFARFALTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLAQSATRALI
8. E03|UL32    FEFVYVMDRHFLRTKKATLVGSFARFALTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLAQSATRALI
9. E06|UL32    FEFVYVMDRHFLRTKKATLVGSFARFALTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLAQSATRALI
10. E07|UL32   FEFVYVMDRHFLRTKKATLVGSFARFALTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLAQSATRALI
11. E08|UL32   FEFVYVMDRHFLRTKKATLVGSFARFALTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLAQSATRALI
12. E10|UL32   FEFVYVMDRHFLRTKKATLVGSFARFALTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLAQSATRALI
13. E11|UL32   FEFVYVMDRHFLRTKKATLVGSFARFALTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLAQSATRALI
14. E12|UL32   FEFVYVMDRHFLRTKKATLVGSFARFALTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLAQSATRALI
15. E13|UL32   FEFVYVMDRHFLRTKKATLVGSFARFALTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLAQSATRALI
16. E14|UL32   FEFVYVMDRHFLRTKKATLVGSFARFALTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLAQSATRALI
17. E15|UL32   FEFVYVMDRHFLRTKKATLVGSFARFALTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLAQSATRALI
18. E19|UL32   FEFVYVMDRHFLRTKKATLVGSFARFALTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLAQSATRALI
19. E22|UL32   FEFVYVMDRHFLRTKKATLVGSFARFALTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLAQSATRALI
20. E23|UL32   FEFVYVMDRHFLRTKKATLVGSFARFALTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLAQSATRALI
21. E25|UL32   FEFVYVMDRHFLRTKKATLVGSFARFALTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLAQSATRALI
22. E35|UL32   FEFVYVMDRHFLRTKKATLVGSFARFALTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLAQSATRALI
23. R11|UL32   FEFVYVMDRHFLRTKKATLVGSFARFALTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLAQSATRALI
24. R62|UL32   FEFVYVMDRHFLRTKKATLVGSFARFALTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLAQSATRALI
25. S23|UL32   FEFVYVMDRHFLRTKKATLVGSFARFALTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLAQSATRALI
26. S25|UL32   FEFVYVMDRHFLRTKKATLVGSFARFALTINDIHRHFFLHCCFRTDGGVPGRHAQKQPKPSPSPGAAKVQYSNYSFLAQSATRALI

           260       270       280       290       300       310       320       330       340
Consensus  GTLASGGEEGAGSAAGSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDTWAYADLVLLL
Identity

1. 17v2|UL32   GTLASGGEEGAGSAAGSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDTWAYADLVLLL
2. F|UL32      GTLASGGEEGAGS-AGSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDTWAYADLVLLL
3. H129|UL32   GTLASGGEWAGSAAGSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDTWAYADLVLLL
4. KOS|UL32    GTLASGGEEGAGSAAGSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDTWAYADLVLLL
5. McKr|UL32   GTLASGGEEGAGSAAVSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDTWAYADLVLLL
6. HF10|UL32   GTLASGGEEGAGS-AGSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDTWAYADLVLLL
7. CR38|UL32   GTLASGGEEGAGSAAGSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDTWAYADLVLLL
8. E03|UL32    GTLASGGEEGAGSAAGSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDTWAYADLVLLL
9. E06|UL32    GTLASGGEEGAGLAAGSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDTWAYADLVLLL
10. E07|UL32   GTLASGGEEGAGLAAGSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDTWAYADLVLLL
11. E08|UL32   GTLASGGEEGAGSAAGSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDTWAYADLVLLL
12. E10|UL32   GTLASGGEEGAGLAAGSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDTWAYADLVLLL
13. E11|UL32   GTLASGGEEGAGLAAGSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDTWAYADLVLLL
14. E12|UL32   GTLASGGEEGAGSAAGSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDTWAYADLVLLL
15. E13|UL32   GTLASGGEEGAGSAAGSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDTWAYADLVLLL
16. E14|UL32   GTLASGGEEGAGSAAGSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDMWAYADLVLLL
17. E15|UL32   GTLASGGEEGAGLAAGSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDTWAYADLVLLL
18. E19|UL32   GTLASGGEEGAGSAAGSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDTWAYADLVLLL
19. E22|UL32   GTLASGGEEGAGLAAGSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDTWAYADLVLLL
20. E23|UL32   GTLASGGEEGAGLAAGSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDTWAYADLVLLL
21. E25|UL32   GTLASGGEEGAGLAAGSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDTWAYADLVLLL
22. E35|UL32   GTLASGGEEGAGLAAGSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDTWAYADLVLLL
23. R11|UL32   GTLASGGEEGAGSAAVSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDTWAYADLVLLL
24. R62|UL32   GTLASGGEEGAGLVAGSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDTWAYADLVLLL
25. S23|UL32   GTLASGGEEGAGLVAGSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDTWAYADLVLLL
26. S25|UL32   GTLASGGEEGAGLVAGSGTQPSLTTALMNWKDCARLLDCTEGRRGGGDSCCTRAAARNGEFETVAGDREPEESPDTWAYADLVLLL

               350       360       370       380       390       400       410       420       430
Consensus  LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARTRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL
Identity

1. 17v2|UL32   LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARTRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL
2. F|UL32      LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARTRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL
3. H129|UL32   LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARTRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL
4. KOS|UL32    LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARTRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL
5. McKr|UL32   LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARTRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL
6. HF10|UL32   LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARTRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL
7. CR38|UL32   LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARTRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL
8. E03|UL32    LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARTRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL
9. E06|UL32    LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARTRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL
10. E07|UL32   LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARTRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL
11. E08|UL32   LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARMRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL
12. E10|UL32   LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARTRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL
13. E11|UL32   LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARTRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL
14. E12|UL32   LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARTRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL
15. E13|UL32   LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARTRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL
16. E14|UL32   LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARTRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL
17. E15|UL32   LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARTRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL
18. E19|UL32   LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARTRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL
19. E22|UL32   LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARTRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL
20. E23|UL32   LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARTRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL
21. E25|UL32   LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARTRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL
22. E35|UL32   LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARTRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL
23. R11|UL32   LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARTRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL
24. R62|UL32   LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARTRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL
25. S23|UL32   LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARTRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL
26. S25|UL32   LAGTPAVWESGPQLRAAAEARRATVRQSWEAHRGARTRDVAPRFAQFTEPDAQPDLDLGPLMATVLKHGRGRGRTGGECLLCNLLL

                  440       450       460       470       480       490       500       510
Consensus  VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVSLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG
Identity

1. 17v2|UL32   VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVSLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG
2. F|UL32      VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVSLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG
3. H129|UL32   VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVSLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG
4. KOS|UL32    VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVSLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG
5. McKr|UL32   VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVSLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG
6. HF10|UL32   VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVSLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG
7. CR38|UL32   VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVSLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG
8. E03|UL32    VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVSLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG
9. E06|UL32    VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVSLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG
10. E07|UL32   VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVSLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG
11. E08|UL32   VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVSLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG
12. E10|UL32   VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVSLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG
13. E11|UL32   VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVSLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG
14. E12|UL32   VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVSLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG
15. E13|UL32   VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVSLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG
16. E14|UL32   VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVSLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG
17. E15|UL32   VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVSLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG
18. E19|UL32   VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVSLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG
19. E22|UL32   VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVSLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG
20. E23|UL32   VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVSLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG
21. E25|UL32   VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVSLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG
22. E35|UL32   VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVSLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG
23. R11|UL32   VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVNLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG
24. R62|UL32   VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVSLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG
25. S23|UL32   VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVSLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG
26. S25|UL32   VRAYWLALRRLRASVVRYSENNTSLFDCIVPVVDQLEADPETQPGDGGRFVSLLRAAGPEAIFKHMFCDPMCAITEMEVDPWVLFG

               520       530       540       550       560       570       580       590     596
Consensus  HPPATHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
Identity

1. 17v2|UL32   HPPATHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
2. F|UL32      HPPATHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
3. H129|UL32   HPPATHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
4. KOS|UL32    HPPATHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
5. McKr|UL32   HPPATHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
6. HF10|UL32   HPPATHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
7. CR38|UL32   HPPATHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
8. E03|UL32    HPPATHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
9. E06|UL32    HPPATHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
10. E07|UL32   HPPATHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
11. E08|UL32   HPPATHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
12. E10|UL32   HPPATHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
13. E11|UL32   HPPATHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
14. E12|UL32   HPPATHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
15. E13|UL32   HPPATHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
16. E14|UL32   HPPATHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
17. E15|UL32   HPPATHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
18. E19|UL32   HPPATHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
19. E22|UL32   HPPATHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
20. E23|UL32   HPPATHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
21. E25|UL32   HPPATHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
22. E35|UL32   HPPATHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
23. R11|UL32   HPPTTHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
24. R62|UL32   HPPATHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
25. S23|UL32   HPPATHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
26. S25|UL32   HPPATHPDELLLHKAKLACGNEFEGRVCIALRALIYTFKTYQVFVPKPTALATFVREAGALLRRHSISLLSLEHTLCTYV
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