```
                1        10        20        30        40        50        60        70
Consensus       MKRACSRSPSPRRRPSSPRRTPPRDGTPPQKADADDPTPGASNDAATETRPGSGGEPAACRSSGPAGAPRRPRGCPAGV
Identity        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

1. 17v2|UL2    MKRACSRSPSPRRRPSSPRRTPPRDGTPPQKADADDPTPGASNDASTETRPGSGGEPAACRSSGPAGAPRRPRGCPAGV
2. F|UL2        MKRACSRSPSPRRRPSSPRWTPPRDGTPPQKADADDPTPGASNDAATETRPGSGGEPAACRSSGPAGAPRRPRGCPAGV
3. H129|UL2     MKRACSRSPSPRRRPSSPRRTPPRDGTPPQKADADDPTPGASNDAATETRPGSGGEPAACRSSGPAGAPRRPRGCPAGV
4. KOS|UL2      MKRACNRSPSPRRRPSSPRRTPPRDGTPPQKADADDPTPGASNDASTETRPGSGGEPAACRSSGPAGAPRRPRGCPAGV
5. McKr|UL2     MKRACSRSPSPRRRPSSPRRTPPRDGTPPQKADADDPIPGASNDASTENRPGLGGEPAACRSSGPAGAPRRPRGCPAGV
6. HF10|UL2     MKRACSRSPSPRRRPSSPRRTPPRDGTPPQKADADDPIPGASNDASTENRPGLGGEPAACRSSGPAGAPRRPRGCPAGV
7. CR38|UL2     MKRACSRSPSPRRRPSSPRRTPPRDGTPPQKADADDPTPGASNDASTETRPGSGGEPAACRSSGPAGAPRRPRGCPAGV
8. E03|UL2      MKRACSRSPSPRRRPSSPRRTPPRDGTPPQKADADDPTPGASNDAATETRPGSGGEPAAGRSSGPAAAPRRPRGCPAGV
9. E06|UL2      MKRACSRSPSPRRRPSSPRRTPPRDGTPPQKADADDPTPGASNDAATETRPGSGGEPAACRSSGPAGAPRRPRGCPAGV
10. E07|UL2     MKRACSRSPSPRRRPSSPRRTPPRDGTPPQKADADDPTPGASNDAATETRPGSGGEPAACRSSGPAGAPRRPRGCPAGV
11. E08|UL2     MKRACSRSPSPRRRPSSPRRTPPRDGTPPQKADADDPTPGASNDAATETRPGSGGEPAACRSSGPAGAPRRPRGCPAGV
12. E10|UL2     MKRACSRSPSPRRRPSSPRRTPPRDGTPPQKADADDPTPGASNDAATETRPGSGGEPAACRSSGPAGAPRRPRGCPAGV
13. E11|UL2     MKRACSRSPSPRRRPSSPRRTPPRDGTPPQKADADDPTPGASNDAATETRPGSGGEPAACRSSGPAGAPRRPRGCPAGV
14. E12|UL2     MKRACSRSPSPRRRPSSPRRTPPRDGTPPQKADADDPTPGASNDASTETRPGSGGEPAACRSSGPAGAPRRPRGCPAGV
15. E13|UL2     MKRACSRSPSPRRRPSSPRRTPPRDGTPPQKADADDPTPGASNDAATETRPGSGGEPAACRSSGPAGAPRRPRGCPAGV
16. E14|UL2     MKRACSRSPSPRRRPSSPRRTPPRDGTPPQKADADDPTPGASNDASTETRPGSGGEPAACRSSGPAGAPRRPRGCPAGV
17. E15|UL2     MKRACSRSPSPRRRPSSPRRTPPRDGTPPQKADADDPTPGASNDAATETRPGSGGEPAACRSSGPAGAPRRPRGCPAGV
18. E19|UL2     MKRACSRSPSPRRRPSSPRRTPPRDGTPPQKADADDPTPGASNDAATETRPGSGGEPAACRSSGPAGAPRRPRGCPAGV
19. E22|UL2     MKRACSRSPSPRRRPSSPRRTPPRDGTPPQKADADDPTPGASSDAATETRPGSGGEPAACRSSGPAGAPRRPRGCPAGV
20. E23|UL2     MKRACSRSPSPRRRPSSPRRTPPRDGTPPQKADADDPTPGASNDAATETRPGSGGEPAACRSSGPAGAPRRPRGCPAGV
21. E25|UL2     MKRACSRSPSPRRRPSSPRRTPPRDGTPPQKADADDPTPGASNDAATETRPGSGGEPAACRSSGPAGAPRRPRGCPAGV
22. E35|UL2     MKRACSRSPSPRRRPSSPRRTPPRDGTPPQKADADDPTPGASNDAATETRPGSGGEPAACRSSGPAGAPRRPRGCPAGV
23. R11|UL2     MKRACSRSPSPRRRPSSPRRTPPRDGTPPQKADADDPTPGASNDASTETRPGSGGEPAACRSSGPAGAPRRPRGCPAGV
24. R62|UL2     MKRACSRSPSPRRRPSSPRRTPPRDGTPPQKADADDPTPGASNDASTETRPGSGGEPAACRSSGPAGAPRRPRGCPAGV
25. S23|UL2     MKRACSRSPSPRRRPSSPRRTPPRDGTPPQKADADDPTPGASNDASTETRPGSGGEPAACRSSGPAGAPRRPRGCPAGV
26. S25|UL2     MKRACSRSPSPRRRPSSPRRTPPRDGTPPQKADADDPTPGASNDASTETRPGSGGEPAACRSSGPAGAPRRPRGCPAGV

                80        90        100       110       120       130       140       150
Consensus       TFSSSAPPDPPMDLTNGGVSPVATSAPLDWTTFRRVFLIDDAWRPLLEPELANPLTAHLLXEYNRRCQTEEVLPPREDV
Identity        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

1. 17v2|UL2    TFSSSAPPDPPMDLTNGGVSPAATSAPLDWTTFRRVFLIDDAWRPLMEPELANPLTAHLLAEYNRRCQTEEVLPPREDV
2. F|UL2        TFSSSAPPDPPMDLTNGGVSPVATSAPLDWTTFRRVFLIDDAWRPLLEPELANPLTAHLLTEYNRRCQTEEVLPPREDV
3. H129|UL2     TFSSSAPPDPPMDLTNGGVSPVATSAPLDWTTFRRVFLIDDAWRPLLEPELANPLTAHLLTEYNRRCQTEEVLPPREDV
4. KOS|UL2      TFSSSAPPDPPMDLTNGGVSPAATSAPLDWTTFRRVFLIDDAWRPLMEPELANPLTAHLLAEYNRRCQTEEVLPPREDV
5. McKr|UL2     TFSSSAPPDPPMDLTNGGVSPAATSAPLDWTTFRRVFLIDDAWRPLLEPELANPLTAHLLAEYNRRCQTEEVLPPREDV
6. HF10|UL2     TFSSSAPPDPPMDLTNGGVSPAATSAPLDWTTFRRVFLIDDAWRPLLEPELANPLTAHLLAEYNRRCQTEEVLPPREDV
7. CR38|UL2     TFSSSAPPDPPMDLTNGGVSPAATSAPLDWTTFRRVFLIDDAWRPLMEPELANPLTAHLLAEYNRRCQTEEVLPPREDV
8. E03|UL2      TFSSSAPPDPPMDLTNEGVSPVATSAPLDWTTFRRVFLIDDAWRPLLEPELANPLTAHLLAEYNRRCQTEEVLPPREDV
9. E06|UL2      TFSSSAPPDPPMDLTNGGVSPVATSAPLDWTTFRRVFLIDDAWRPLLEPELANPLTAHLLTEYNRRCQTEEVLPPREDV
10. E07|UL2     TFSSSAPPDPPMDLTNGGVSPVATSAPLDWTTFRRVFLIDDAWRPLLEPELANPLTAHLLTEYNRRCQTEEVLPPREDV
11. E08|UL2     TFSLSAPPDPPMDLTNGGVSPVATSAPLDWTTFRRVFLIDDAWRPLLEPELANPLTAHLLTEYNRRCQTEEVLPPREDV
12. E10|UL2     TFSSSAPPDPPMDLTNGGVLPVATSAPLDWTTFRRVFLIDDAWRPLLEPELANPLTAHLLTEYNRRCQTEEVLPPREDV
13. E11|UL2     TFSSSAPPDPPMDLTNGGVLPVATSAPLDWTTFRRVFLIDDAWRPLLEPELANPLTAHLLTEYNRRCQTEEVLPPREDV
14. E12|UL2     TFSSSAPPDPPMDLTNGGVSPAATSAPLDWTTFRRVFLIDDAWRPLMEPELANPLTAHLLAEYNRRCQTEEVLPPREDV
15. E13|UL2     TFSLSAPPDPPMDLTNGGVSPVATSVPLDWTTFRRVFLIDDAWRPLLEPELANPLTAHLLTEYNRRCQTEEVLPPREDV
16. E14|UL2     TFSSSAPPDPPMDLTNGGVSPAATSAPLDWTTFRRVFLIDDAWRPLMEPELANPLTAHLLAEYNRRCQTEEVLPPREDV
17. E15|UL2     TFSSSAPPDPPMDLTNGGVLPVATSAPLDWTTFRRVFLIDDAWRPLLEPELANPLTAHLLTEYNRRCQTEEVLPPREDV
18. E19|UL2     TFSLSAPPDPPMDLTNGGVSPVATSAPLDWTTFRRVFLIDDAWRPLLEPELANPLTAHLLTEYNRRCQTEEVLPPREDV
19. E22|UL2     TFSSSAPPDPPMDLTNGGVSPVATSAPLDWTTFRRVFLIDDAWRPLLEPELANPLTAHLLAEYNRRCQTEEVLPPREDV
20. E23|UL2     TFSSSAPPDPPMDLTNGGVLPVATSAPLDWTTFRRVFLIDDAWRPLLEPELANPLTAHLLTEYNRRCQTEEVLPPREDV
21. E25|UL2     TFSSSAPPDPPMDLTNGGVLPVATSAPLDWTTFRRVFLIDDAWRPLLEPELANPLTAHLLTEYNRRCQTEEVLPPREDV
22. E35|UL2     TFSSSAPPDPPMDLTNGGVLPVATSAPLDWTTFRRVFLIDDAWRPLLEPELANPLTAHLLTEYNRRCQTEEVLPPREDV
23. R11|UL2     TFSSSAPPDPPMDLTNGGVSPAATSAPLDWTTFRRVFLIDDAWRPLMEPELANPLTAHLLAEYNRRCQTEEVLPPREDV
24. R62|UL2     TFSSSAPPDPPMDLTNGGVSPAATSAPLDWTTFRRVFLIDDAWRPLMEPELANPLTAHLLAEYNRRCQTEEVLPPREDV
25. S23|UL2     TFSSSAPPDPPMDLTNGGVSPAATSAPLDWTTFRRVFLIDDAWRPLMEPELANPLTAHLLAEYNRRCQTEEVLPPREDV
26. S25|UL2     TFSSSAPPDPPMDLTNGGVSPAATSAPLDWTTFRRVFLIDDAWRPLMEPELANPLTAHLLAEYNRRCQTEEVLPPREDV

                160       170       180       190       200       210       220       230
Consensus       FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLRNVLAAVKNCYPEARMSGHGCLEKWARDGVLLLN
Identity        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

1. 17v2|UL2    FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLRNVLAAVKNCYPEARMSGHGCLEKWARDGVLLLN
2. F|UL2        FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLRNVLAAVKNCYPEARMSGHGCLEKWARDGVLLLN
3. H129|UL2     FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLRNVLAAVKNCYPEARMSGHGCLEKWARDGVLLLN
4. KOS|UL2      FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLRNVLVAVKNCYPEARMSGHGCLEKWARDGVLLLN
5. McKr|UL2     FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLRNVLAAVKNCYPEARMSGHGCLEKWARDGVLLLN
6. HF10|UL2     FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLRNVLAAVKNCYPEARMSGHGCLEKWARDGVLLLN
7. CR38|UL2     FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLRNVLAAVKNCYPEARMSGHGCLEKWARDGVLLLN
8. E03|UL2      FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLRNVLAAVKNCYPEARMSGHGCLEKWARDGVLLLN
9. E06|UL2      FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLWNVLAAVKNCYPEARMSGHGCLEKWARDGVLLLN
10. E07|UL2     FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLRNVLAAVKNCYPEARMSGHGCLEKWARDGVLLLN
11. E08|UL2     FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLRNVLAAVKNCYPEARMSGHGCLEKWARDGVLLLN
12. E10|UL2     FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLRNVLAAVKNCYPEARMSGHGCLEKWARDGVLLLN
13. E11|UL2     FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLRNVLAAVKNCYPEARMSGHGCLEKWARDGVLLLN
14. E12|UL2     FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLRNVLAAVKNCYPEARMSGHGCLEKWARDGVLLLN
15. E13|UL2     FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLRNVLAAVKNCYPEARMSGHGCLEKWARDGVLLLN
16. E14|UL2     FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLRNVLAAVKNCYPEARMSGHGCLEKWARDGVLLLN
17. E15|UL2     FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLRNVLAAVKNCYPEARMSGHGCLEKWARDGVLLLN
18. E19|UL2     FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLRNVLAAVKNCYPEARMSGHGCLEKWARDGVLLLN
19. E22|UL2     FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLRNVLAAVKNCYPEARMSGHGCLEKWARDGVLLLN
20. E23|UL2     FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLRNVLAAVKNCYPEARMSGHGCLEKWARDGVLLLN
21. E25|UL2     FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLRNVLAAVKNCYPEARMSGHGCLEKWARDGVLLLN
22. E35|UL2     FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLRNVLAAVKNCYPEARMSGHGCLEKWARDGVLLLN
23. R11|UL2     FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLRNVLAAVKNCYPEARMSGHGCLEKWARDGVLLLN
24. R62|UL2     FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLRNVLAAVKNCYPEARMSGHGCLEKWARDGVLLLN
25. S23|UL2     FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLRNVLAAVKNCYPEARMSGHGCLEKWARDGVLLLN
26. S25|UL2     FSWTRYCTPDEVRVVIIGQDPYHHPGQAHGLAFSVRANVPPPPSLRNVLAAVKNCYPEARMSGHGCLEKWARDGVLLLN

                240       250       260       270       280       290       300       310
Consensus       TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGAHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL
Identity        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

1. 17v2|UL2    TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGTHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL
2. F|UL2        TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGAHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL
3. H129|UL2     TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGAHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL
4. KOS|UL2      TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGAHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL
5. McKr|UL2     TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGAHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL
6. HF10|UL2     TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGAHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL
7. CR38|UL2     TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGAHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL
8. E03|UL2      TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGAHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL
9. E06|UL2      TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGAHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL
10. E07|UL2     TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGAHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL
11. E08|UL2     TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGAHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL
12. E10|UL2     TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGAHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL
13. E11|UL2     TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGAHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL
14. E12|UL2     TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGAHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL
15. E13|UL2     TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGAHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL
16. E14|UL2     TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGAHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL
17. E15|UL2     TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGAHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL
18. E19|UL2     TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGAHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL
19. E22|UL2     TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGAHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL
20. E23|UL2     TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGAHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL
21. E25|UL2     TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGAHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL
22. E35|UL2     TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGAHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL
23. R11|UL2     TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGAHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL
24. R62|UL2     TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGAHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL
25. S23|UL2     TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGAHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL
26. S25|UL2     TTLTVKRGAAASHSRIGWDRFVGGVIRRLAARRPGLVFMLWGAHAQNAIRPDPRVHCVLKFSHPSPLSKVPFGTCQHFL

                320       330   334
Consensus       VANRYLETRSISPIDWSV
Identity        ||||||||||||||||||

1. 17v2|UL2    VANRYLETRSISPIDWSV
2. F|UL2        VANRYLETRSISPIDWSV
3. H129|UL2     VANRYLETRSISPIDWSV
4. KOS|UL2      VANRYLETRSISPIDWSV
5. McKr|UL2     VANRYLETRSISPIDWSV
6. HF10|UL2     VANRYLETRSISPIDWSV
7. CR38|UL2     VANRYLETRSISPIDWSV
8. E03|UL2      VANRYLETRSISPIDWSV
9. E06|UL2      VANRYLETRSISPIDWSV
10. E07|UL2     VANRYLETRSISPIDWSV
11. E08|UL2     VANRYLETRSISPIDWSV
12. E10|UL2     VANRYLETRSISPIDWSV
13. E11|UL2     VANRYLETRSISPIDWSV
14. E12|UL2     VANRYLETRSISPIDWSV
15. E13|UL2     VANRYLETRSISPIDWSV
16. E14|UL2     VANRYLETRSISPIDWSV
17. E15|UL2     VANRYLETRSISPIDWSV
18. E19|UL2     VANRYLETRSISPIDWSV
19. E22|UL2     VANRYLETRSISPIDWSV
20. E23|UL2     VANRYLETRSISPIDWSV
21. E25|UL2     VANRYLETRSISPIDWSV
22. E35|UL2     VANRYLETRSISPIDWSV
23. R11|UL2     VANRYLETRAISPIDWSV
24. R62|UL2     VANRYLETRAISPIDWSV
25. S23|UL2     VANRYLETRAISPIDWSV
26. S25|UL2     VANRYLETRAISPIDWSV
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