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khr mutant 1 (1 strains)   ATGGGCCACTTAGCGATCCTTTTCAGTATTATCGCTGTATGGAATATAGCTACAGCTGTTGCATCGAGCGACAGCATTTACCTTAAGGGACACAGAGTAG   100
khr mutant 4 (1 strains)   ATGGGTCACTTAGCGATCCTTTTCAGTATTATCGCTGTATGGAATATAGCTACAGCTGTTGCATCGAGCGACAGCATTTACCTTAAGGGACACAGAGTAG   100
khr mutant 3 (1 strains)   ATGGGCCACTTAGCGATCCTTTTCAGTATTATCGCTGTATGGAATATAGCTACAGCTGTTGCATCGAGCGACAGCATTTACCTTAAGGGACACAGAGTAG   100
khr mutant 5 (2 strains)   ATGGGCCACTTAGCGATCCTTTTCAGTATTATCGCTGTATGGAATATAGCTACAGCTGTTGCATCGAGCGACAGCATTTACCTTAAGGGACACAGAGTAG   100
khr mutant 2 (3 strains)   ATGGGCCACTTAGCGATCCTTTTCAGTATTATCGCTGTATGGAATATAGCTACAGCTGTTGCATCGAGCGACAGCATTTACCTTAAGGGACACAGAGTAG   100
khr mutant 9 (19 strains)  ATGGGCCACTTAGCGATCCTTTTCAGTATTATCGCTGTATGGAATATAGCTACAGCTGTTGCATCGAGCGACAGCATTTACCTTAAGGGACACAGAGTAG   100
khr mutant 10 (1 strains)  ATGGGCCACTTAGCGATCCTTTTCAGTATTATCGCTGTATGGAATATAGCTACAGCTGTTGCATCGAGCGACAGCATTTACCTTAAGGGACACAGAGTAG   100
khr mutant 3 (5 strains)   ATGGGCCACTTAGCGATCCTTTTCAGTATTATCGCTGTATGGAATATAGCTACAGCTGTTGCATCGAGCGACAGCATTTACCTTAAGGGACACAGAGTAG   100
khr mutant 8 (2 strains)   ATGGGCCACTTAGCGATCCTTTTCAGTATTATCGCTGTATGGAATATAGCTACAGCTGTTGCATCGAGCGACAGCATTTACCTTAAGGGACACAGAGTAG   100
khr mutant 7 (6 strains)   ATGGGCCACTTAGCGATCCTTTTCAGTATTATCGCTGTATGGAATATAGCTACAGCTGTTGCATCGAGCGACAGCATTTACCTTAAGGGACACAGAGTAG   100
khr mutant 11 (1 strains)  ATGGGCCACTTAGCGATCCTTTTCAGTATTATCGCTGTATGGAATATAGCTACAGCTGTTGCATCGAGCGACAGCATTTACCTTAAGGGACACAGAGTAG   100
khr mutant 6 (1 strains)   ATGGGCCACTTAGCGATCCTTTTCAGTATTATCGCTGTATGGAATATAGCTACAGCTGTTGCATCGAGCGACAGCATTTACCTTAAGGGACACAGAGTAG   100
khr mutant 2 (1 strains)   ATGGGCCACTTAGCGATCCTTTTCAGTATTATCGCTGTATGGAATATAGCTACAGCTGTTGCATCGAGCGACAGCATTTACCTTAAGGGACACAGAGTAG   100
khr mutant 13 (1 strains)  ATGGGCCACTTAGCGATCCTTTTCAGTATTATCGCTGTATGGAATATAGCTACAGCTGTTGCATCGAGCGACAGCATTTACCTTAAGGGACACAGAGTAG   100
khr mutant 1 (1 strains)   ATGGGCCACTTAGCGATCCTTTTCAGTATTATCGCTGTATGGAATATAGCTACAGCTGTTGCATCGAGCGACAGCATTTACCTTAAGGGACACAGAGTAG   100
khr mutant 12 (1 strains)  ATGGGCCACTTAGCGATCCTTTTCAGTATTATCGCTGTATGGAATATAGCTACAGCTGTTGCATCGAGCGACAGCATTTACCTTAAGGGACACAGAGTAG   100
consensus                  !!!!!*!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

khr mutant 1 (1 strains)   GACAGGATATCGACAGTCTATACAGAGTGTACGATAATGGTACTATGTACCCTGTCACTTTCAATGAGTGGTTAAATGATCTAACTGGGATGGATGACTT   200
khr mutant 4 (1 strains)   GACAGGATATCGACAGTCTATACAGAGTGTACGATAATGGTACTATGTACCCTGTCACTTTCAATGAGTGGTTAAATGATCTAACTGGGATGGATGACTT   200
khr mutant 3 (1 strains)   GACAGGATATCGACAGTCTATACAGAGTGTACGATAATGGTACTATGTACCCTGTCACTTTCAATGAGTGGTTAAATGATCTAACTGGGATGGATGACTT   200
khr mutant 5 (2 strains)   GACAGGATATCGACAGTCTATACAGAGTGTACGATAATGGTACTATGTACCCTGTCACTTTCAATGAGTGGTTAAATGATCTAACTGGGATGGATGACTT   200
khr mutant 2 (3 strains)   GACAGGATATCGACAGTCTATACAGAGTGTACGATAATGGTACTATGTACCCTGTCACTTTCAATGAGTGGTTAAATGATCTAACTGGGATGGATGACTT   200
khr mutant 9 (19 strains)  GACAGGATATCGACAGTCTATACAGAGTGTACGATAATGGTACTATGTACCCTGTCACTTTCAATGAGTGGTTAAATGATCTAACTGGGATGAATGACTT   200
khr mutant 10 (1 strains)  GACAGGATATCGACAGTCTATACAGAGTGTACGATAATGGTACTATGTACCCTGTCACTTTCAATGAGTGGTTAAATGATCTAACTGGGATGAATGACTT   200
khr mutant 3 (5 strains)   GACAGGATATCGACAGTCTATACAGAGTGTACGATAATGTTACTATGTACCCTGTCACTTTCAATGAGTGGTTAAATGATCTAACTGGGATGAATGACTT   200
khr mutant 8 (2 strains)   GACAGGATATCGACAGTCTATACAGAGTGTACGATAATGGTACTATGTACCCTGTCACTTTCAATGAGTGGTTAAATGATCTAACTGGGATGAATGACTT   200
khr mutant 7 (6 strains)   GACAGGATATCGACAGTCTATACAGAGTGTACGATAATGGTACTATGTACCCTGTCACTTTCAATGAGTGGTTAAATGATCTAACTGGGATGAATGACTT   200
khr mutant 11 (1 strains)  GACAGGATATCGACAGTCTATACAGAGTGTACGATAATGGTACTATGTACCCTGTCACTTTCAATGAGTGGTTAAATGATCTAACTGGGATGAATGACTT   200
khr mutant 6 (1 strains)   GACAGGATATCGACAGTCTATACAGAGTGTACGATAATGGTACTATGTACCCTGTCACTTTCAATGAGTGGTTAAATGATCTAACTGGGATGAATGACTT   200
khr mutant 2 (1 strains)   GACAGGATATCGACAGTCTATACAGAGTGTACGATAATGGTACTATGTACCCTGTCACTTTCAATGAGTGGTTAAATGATCTAACTGGGATGAATGACTT   200
khr mutant 13 (1 strains)  GACAGGATATCGACAGTCTATACAGAGTGTACGATAATGGTACTATGTACCCTGTCACTTTCAATGAGTGGTTAAATGATCTAACTGGGATGAATGACTT   200
khr mutant 1 (1 strains)   GACAGGATATCGACAGTCTATACAGAGTGTACGATAATGGTACTATGTACCCTGTCACTTTCAATGAGTGGTTAAATGATCTAACTGGGATGAATGACTT   200
khr mutant 12 (1 strains)  GACAGGATATCGACAGTCTATACAGAGTGTACGATAATGGTACTATGTACCCTGTCACTTTCAATGAGTGGTTAAATGATCTAACTGGGATGAATGACTT   200
consensus                  !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!*!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!*!!!!!!!
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khr mutant 1 (1 strains)    GGCAACAAATAACGCGACAATATTAAAACGTGACAGTAGCGATGTTTCTTGCGTTAATGAAACATGCCAATACGTGGATTACCACGTGGATGACGAAGGA 300
khr mutant 4 (1 strains)    GGCAACAAATAACGCGACAATATTAAAACGTGACAGTAGCGATGTTTCTTGCGTTAATGAAACATGCCAATACGTGGATTACCACGTGGATGACGAAGGA 300
khr mutant 3 (1 strains)    GGCAACAAATAACGCGACAATATTAAAACGTGACAGTAGCGATGTTTCTTGCGTTAATGAAACATGCCAATATGTGGATTACCACGTGGATGACGAAGGA 300
khr mutant 5 (2 strains)    GGCAACAAATAACGCGACAATATTAAAACGTGACAGTAGCGATGTTTCTTGCGTTAATGAAACATGCCAATATGTGGATTACCACGTGGATGACGAAGGA 300
khr mutant 2 (3 strains)    GGCAACAAATAACGCGACAATATTAAAACGTGACAGTAGCGATGTTTCTTGCGTTAATGAAACATGCCAATACGTGGATTACCACGTGGATGACGAAGGA 300
khr mutant 9 (19 strains)   GGCAACAAATAACGCGACAATATTAAAACGTGACAGTAGCGATGTTTCTTGCGTTAATGAAACATGCCAATACGTGGATTACCACGTGGATGACGAAGGA 300
khr mutant 10 (1 strains)   GGCAACAAATAACGCGACAATATTAAAACGTGACAGTAGCGATGTTTCTTGCGTTAATGAAACATGCCAATACGTGGATTACCACGTGGATGACGAAGGA 300
khr mutant 3 (5 strains)    GGCAACAAATAACGCGACAATATTAAAACGTGACAGTAGCGATGTTTCTTGCGTTAATGAAACATGCCAATACGTGGATTACCACGTGGATGACGAAGGA 300
khr mutant 8 (2 strains)    GGCAACAAATAACGCGACAATATTAAAACGTGACAGTAGCGATGTTTCTTGCGTTAATGAAACATGCCAATACGTGGATTACCACGTGGATGACGAAGGA 300
khr mutant 7 (6 strains)    GGCAACAAATAACGCGACAATATTAAAACGTGACAGTAGCGATGTTTCTTGCGTTAATGAAACATGCCAATACGTGGATTACCACGTGGATGACGAAGGA 300
khr mutant 11 (1 strains)   GGCAACAAATAACGCGACAATATTAAAACGTGACAGTAGCGATGTTTCTTGCGTTAATGAAACATGCCAATACGTGGATTACCACGTGGATGACGAAGGA 300
khr mutant 6 (1 strains)    GGCAACAAATAACGCGACAATATTAAAACGTGACAGTAGCGATGTTTCTTGCGTTAATGAAACATGCCAATACGTGGATTACCACGTGGATGACGAAGGA 300
khr mutant 2 (1 strains)    GGCAACAAATAACGCGACAATATTAAAACGTGACAGTAGCGATGTTTCTTGCGTTAATGAAACATGCCAATACGTGGATTACCACGTGGATGACGAAGGA 300
khr mutant 13 (1 strains)   GGCAACAAATAACGCGACAATATTAAAACGTGACAGTAGCGATGTTTCTTGCGTTAATGAAACATGCCAATACGTGGATTACCACGTGGATGACGAAGGA 300
khr mutant 1 (1 strains)    GGCAACAAATAACGCGACAATATTAAAACGTGACAGTAGCGATGTTTCTTGCGTTAATGAAACATGCCAATACGTGGATTACCACGTGGATGACGAAGGA 300
khr mutant 12 (1 strains)   GGCAACAAATAACGCGACAATATTAAAACGTGACAGTAGCGATGTTTCTTGCGTTAATGAAACATGCCAATACGTGGATTACCACGTGGATGACGAAGGA 300
consensus                   !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!*!!!!!!!!!!!!!!!!!!!!!!!!!!!

khr mutant 1 (1 strains)    GTTATAAATATAGACATATCTACGTATCGTATCCCTGTCGAATGGGATAATGGTTCTGCAGGCAACGCATCATATGGAGTCTCAAAGCGTGATACAAAAT 400
khr mutant 4 (1 strains)    GTTATAACTATAGACATATCTACGTATCGTATCCCTGTCGAATGGGATAATGGTTCTGCAGGCAACGCATCATATGGAGTCTCAAAGCGTGATACAAAAT 400
khr mutant 3 (1 strains)    GTTATAACTATAGACATATCTACGTATCGTATCCCTGTCGAATGGGATAATGGTTCTGCAGGCAACGCATCATATGGAGTCTCAAAGCGTGATACAAAAT 400
khr mutant 5 (2 strains)    GTTATAACTATAGACATATCTACGTATCGTATCCCTGTCGAATGGGATAATGGTTCTGCAGGCAACGCATCATATGGAGTCTCAAAGCGTGATACAAAAT 400
khr mutant 2 (3 strains)    GTTATAACTATAGACATATCTACGTATCGTATCCCTGTCGAATGGGATAATGGTTCTGCAGGCAACGCATCATATGGAGTCTCAAAGCGTGATACAAAAT 400
khr mutant 9 (19 strains)   GTTATAACTATAGACATATCTACGTATCGTATCCCTGTCGAATGGGATAATGGTTCTGCAGGCAACGCATCATATGGAGTCTCAAAGCGTGATACAAAAT 400
khr mutant 10 (1 strains)   GTTATAACTATAGACATATCTACGTATCGTATCCCTGTCGAATGGGATAATGGTTCTGCAGGCAACGCATCATATGGAGTCTCAAAGCGTGATACAAAAT 400
khr mutant 3 (5 strains)    GTTATAACTATAGACATATCTACGTATCGTATCCCTGTCGAATGGGATAATGGTTCTGCAGGCAACGCATCATATGGAGTCTCAAAGCGTGATACAAAAT 400
khr mutant 8 (2 strains)    GTTATAACTATAGACATATCTACGTATCGTATCCCTGTCGAATGGGATAATGGTTCTGCAGGCAACGCATCATATGGAGTCTCAAAGCGTGATACAAAAT 400
khr mutant 7 (6 strains)    GTTATAACTATAGACATATCTACGTATCGTATCCCTGTCGAATGGGATAATGGTTCTGCAGGCAACGCATCATATGGAGTCTCAAAGCGTGATACAAAAT 400
khr mutant 11 (1 strains)   GTTATAACTATAGACATATCTACGTATCGTATCCCTGTCGAATGGGATAATGGTTCTGCAGGCAACGCATCATATGGAGTCTCAAAGCGTGATACAAAAT 400
khr mutant 6 (1 strains)    GTTATAACTATAGACATATCTACGTATCGTATCCCTGTCGAATGGGATAATGGTTCTGCAGACAACGCATCATATGGAGTCTCAAAGCGTGATACAAAAT 400
khr mutant 2 (1 strains)    GTTATAACTATAGACATATCTACGTATCGTATCCCTGTCGAATGGGATAATGGTTCTGCAGGCAACGCATCATATGGAGTCTCAAAGCGTGATACAAAAT 400
khr mutant 13 (1 strains)   GTTATAACTATAGACATATCTACGTATCGTATCCCTGTCGAATGGGATAATGGTTCTGCAGGCAACGCATCATATGGAGTCTCAAAGCGTGATACAAAAT 400
khr mutant 1 (1 strains)    GTTATAACTATAGACATATCTACGTATCGTATCCCTGTCGAATGGGATAATGGTTCTGCAGGCAACGCATCATATGGAGTCTCAAAGCGTGATACAAAAT 400
khr mutant 12 (1 strains)   GTTATAACTATAGACATATCTACGTATCGTATCCCTGTCGAATGGGATAATGGTTCTGCAGGCAACGCATCATATGGAGTCTCAAAGCGTGATACAAAAT 400
consensus                   !!!!!!!*!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!*!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

khr mutant 1 (1 strains)    ATGAGACATTCTGTAAGAAGAAAATATGCGGTATAAACGTTTCCGGTTTCTGTAACGCGTATGACTTCGCCGTTCCTGCTTTCGACTTCGGTGGCAATGT 500
khr mutant 4 (1 strains)    ATGAGACATTCTGTAAGAAGAAAATATGCGGTATAAACGTTTCCGGTTTCTGTAACGCGTATGACTTCGCCGTTCCTGCTTTCGACTTCGGTGGCAATGT 500
khr mutant 3 (1 strains)    ATGAGACATTCTGTAAGAAGAAAATATGCGGTATAAACGTTTCCGGTTTCTGTAACGCGTATGACTTCGCCGTTCCTGCTTTCGACTTCGGTGGCAATGT 500
khr mutant 5 (2 strains)    ATGAGACATTCTGTAAGAAGAAAATATGCGGTATAAACGTTTCCGGTTTCTGTAACGCGTATGACTTCGCCGTTCCTGCTTTCGACTTCGGTGGCAATGT 500
khr mutant 2 (3 strains)    ATGAGACATTCTGTAAGAAGAAAATATGCGGTATAAACGTTTCCGGTTTCTGTAACGCGTATGACTTCGCCGTTCCTGCTTTCGACTTCGGTGGCAATGT 500
khr mutant 9 (19 strains)   ATGAGACATTCTGTAAGAAGAAAATATGCGGTATAAACGTTTCCGGTTTCTGTAACGCGTATGACTTCGCCGTTCCTGCTTTCGACTTCGGTGGCAATGT 500
khr mutant 10 (1 strains)   ATGAGACATTCTGTAAGAAGAAAATATGCGGTATAAACGTTTCCGGTTTCTGTAACGCGTATGACTTCGCCGTTCCTGCTTTCGACTTCGGTGGCAATGT 500
khr mutant 3 (5 strains)    ATGAGACATTCTGTAAGAAGAAAATATGCGGTATAAACGTTTCCGGTTTCTGTAACGCGTATGACTTCGCCGTTCCTGCTTTCGACTTCGGTGGCAATGT 500
khr mutant 8 (2 strains)    ATGAGACATTCTGTAAGAAGAAAATATGCGGTATAAACGTTTCCGGTTTCTGTAACGCGTATGACTTCGCCGTTCCTGCTTTCGACTTCGGTGGCAATGC 500
khr mutant 7 (6 strains)    ATGAGACATTCTGTAAGAAGAAAATATGCGGTATAAACATTTCCGGTTTCTGTAACGCGTATGACTTCGCCGTTCCTGCTTTCGACTTCGGTGGCAATGT 500
khr mutant 11 (1 strains)   ATGAGACATTCTGTAAGAAGAAAATATGCGGTATAAACGTTTCCGGTTTCTGTAACGCGTATGACTTCGCCGTTCCTGCTTTCGACTTCGGTGGCAATGT 500
khr mutant 6 (1 strains)    ATGAGACATTCTGTAAGAAGAAAATATGCGGTATAAACGTTTCCGGTTTCTGTAACGCGTATGACTTCGCCGTTCCTGCTTTCGACTTCGGTGGCAATGT 500
khr mutant 2 (1 strains)    ATGAGACATTCTGTAAGAAGAAAATATGCGGTATAAACGTTTCCGGTTTCTGTAACGCGTATGACTTCGCCGTTCCTGCTTTCGACTTCGGTGGCAATGT 500
khr mutant 13 (1 strains)   ATGAGACATTCTGTAAGAAGAAAATATGTGGTATAAACGTTTCCGGTTTCTGTAACGCGTATGACTTCGCCGTTCCTGCTTTCGACTTCGGTGGCAATGT 500
khr mutant 1 (1 strains)    ATGAGACATTCTGTAAGAAGAAAATATGCGGTATAAACGTTTCCGGTTTCTGTAACGCGTATGACTTCGCCGTTCCTGCTTTCGACTTCGGTGGCAATGT 500
khr mutant 12 (1 strains)   ATGAGACATTCTGTAAGAAGAAAATATGCGGTATAAACGTTTCCGGTTTCTGTAACGCGTATGACTTCGCCGTTCCTGCTTTCGACTTCGGTGGCAATGT 500
consensus                   !!!!!!!!!!!!!!!!!!!!!!!!!!!!*!!!!!!!!!*!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!*
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khr mutant 1 (1 strains)    CTACAACCTTGTTAGTGGTATCACTGATAGGATTAAAGAAGCTACGAAGAGGGATAAGACTGAATGTCTAGGTTACGAACTAGATCATGTGAGAATAGAT  600
khr mutant 4 (1 strains)    CTACAACCTTGTTAGTGGTATCACTGATAGGATTAAAGAAGCTACGAAGAGGGATAAGACTGAATGTCTAGGTTACGAACTAGATCATGTGAGAATAGAT  600
khr mutant 3 (1 strains)    CTACAACCTTGTTAGTGGTATCACTGATAGGATTAAAGAAGCTACGAAGAGGGATAAGACTGAATGTCTAGGTTACGAACTAGATCATGTGAGAATAGAT  600
khr mutant 5 (2 strains)    CTACAACCTTGTTAGTGGTATCACTGATAGGATTAAAGAAGTTACGAAGAGGGATAAGACTGAATGTCTAGGTTACGAACTAGATCATGTGAGAATAGAT  600
khr mutant 2 (3 strains)    CTACAACCTTGTTAGTGGTATCACTGATAGGATTAAAGAAGCTACGAAGAGGGATAAGACTGAATGTCTAGGTTACGAACTAGATCATGTGAGAATAGAT  600
khr mutant 9 (19 strains)   CTACAACCTTGTTAGTGGTATCACTGATAGGATTAAAGAAGCTACGAAGAGGGATAAGACTGAATGTCTAGGTTACGAACTAGATCATGTGAGAATAGAT  600
khr mutant 10 (1 strains)   CTACAATCTTGTTAGTGGTATCACTGATAGGATTAAAGAAGCTACGAAGAGGGATAAGACTGAATGTCTAGGTTACGAACTAGATCATGTGAGAATAGAT  600
khr mutant 3 (5 strains)    CTACAACCTTGTTAGTGGTATCACTGATAGGATTAAAGAAGCTACGAAGAGGGATAAGACTGAATGTCTAGGTTACGAACTAGATCATGTGAGAATAGAT  600
khr mutant 8 (2 strains)    CTACAACCTTGTTAGTGGTATCACTGATAGGATTAAAGAAGCTACGAAGAGGGATAAGACTGAATGTCTAGGTTACGAACTAGATCATGTGAGAATAGAT  600
khr mutant 7 (6 strains)    CTACAACCTTGTTAGTGGTATCACTGATAGGATTAAAGAAGCTACGAAGAGGGATAAGACTGAATGTCTAGGTTACGAACTAGATCATGTGAGAATAGAT  600
khr mutant 11 (1 strains)   CTACAGCCTTGCTAGTGATATCATTGATAGGATTAAAGAAGCTACGAAGAGGGATAAGACTGAATGTCTAGGTTACGAACTAGATCATGTGAGAATAGAT  600
khr mutant 6 (1 strains)    CTACAGCCTTGCTAGTGATATCATTGATAGGATTAAAGGCGCTACGAAGAGGGATAAGACCGAATGTCTACGTTACGAACTAGATCATGTGAGAATAGAT  600
khr mutant 2 (1 strains)    CTACAGCCTTGCTAGTGATATCATTGATAGGATTAAAGGCACTACGAAGAGGGATAAGACCGAATGTCTACGTTACGAACTAGATCATGTGAGAATAGAT  600
khr mutant 13 (1 strains)   CTACAGCCTTGCTAGTGATATCATTGATAGGATTAAAGGCGCTACGAAGAGGGATAAGACCGAATGTCTACGTTACGAACTAGATCATGTGAGAATAGAT  600
khr mutant 1 (1 strains)    CTACAGCCTTGCTAGTGATATCATTGATAGGATTAAAGGCGCTACGAAGAGGGATAAGACCGAATGTCTACGTTACGAACTAGATCATGTGAGAATAGAT  600
khr mutant 12 (1 strains)   CTACAGCCTTGCTAGTGATATCATTGATAGGATTAAAGGCGCTACGAAGAGGGATAAGACTGAATGTCTAGGTTACGAACTAGATCATGTGAGAATAGAT  600
consensus                   !!!!!**!!!!*!!!!!*!!!!!*!!!!!!!!!!!!!!****!!!!!!!!!!!!!!!!!!*!!!!!!!!!*!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

khr mutant 1 (1 strains)    CCTGCTGTTGATTGGTCCATATTTATTTCTACTTGGAAACAAGGGTCGGCCAATTGTGACACACAGGCATCTGCTGACAGCTTGAAATGTGCTGCCCAAA  700
khr mutant 4 (1 strains)    CCTGCTGTTGATTGGTCCATATTTATTTCTACTTGGAAACAAGGGTCGGCCAATTGTGACACACAGGCATCTGCTGACAGCTTGAAATGTGCTGCCCAAA  700
khr mutant 3 (1 strains)    CCTGCTGTTGATTGGTCCATATTTATTTCTACTTGGAAACAAGGGTCGGCCAATTGTGACACACAGGCATCTGCTGACAGCTTGAAATGTGCTGCCCAAA  700
khr mutant 5 (2 strains)    CCTGCTGTTGATTGGTCCATATTTATTTCTACTTGGAAACAAGGGTCGGCCAATTGTGACACACAGGCATCTGCTGACAGCTTGAAATGTGCTGCCCAAA  700
khr mutant 2 (3 strains)    CCTGCTGTTGATTGGTCCATATTTATTTCTACTTGGAAACAAGGGTCGGCCAATTGTGACACACAGGCATCTGCTGACAGCTTGAAATGTGCTGCCCAAA  700
khr mutant 9 (19 strains)   CCTGCTGTTGATTGGTCCATATTTATTTCTACTTGGAAACAAGGGTCGGCCAATTGTGACACACAGGCATCTGCTGACAGCTTGAAATGTGCTGCCCAAA  700
khr mutant 10 (1 strains)   CCTGCTGTTGATTGGTCCATATTTATTTCTACTTGGAAACAAGGGTCGGCCAATTGTGACACACAGGCATCTGCTGACAGCTTGAAATGTGCTGCCCAAA  700
khr mutant 3 (5 strains)    CCTGCTGTTGATTGGTCCATATTTATTTCTACTTGGAAACAAGGGTCGGCCAATTGTGACACACAGGCATCTGCTGACAGCTTGAAATGTGCTGCCCAAA  700
khr mutant 8 (2 strains)    CCTGCTGTTGATTGGTCCATATTTATTTCTACTTGGAAACAAGGGTCGGCCAATTGTGACACACAGGCATCTGCTGACAGCTTGAAATGTGCTGCCCAAA  700
khr mutant 7 (6 strains)    CCTGCTGTTGATTGGTCCATATTTATTTCTACTTGGAAACAAGGGTCGGCCAATTGTGACACACAGGCATCTGCTGACAGCTTGAAATGTGCTGCCCAAA  700
khr mutant 11 (1 strains)   CCTGCTGTTGATTGGTCCATATTTATTTCTACTTGGAAACAAGGGTCGGCCAATTGTGACACACAGGCATCTGCTGACAGCTTGAAATGTGCTGCCCAAA  700
khr mutant 6 (1 strains)    CCTGCTGTTGATTGGTCTATATTTATTTCTACTTGGAAGCAAGGGCCGGCCAATTATGACACACAGGCATCTGCTGACAGCTTGAAATGTGCTGCCCAAA  700
khr mutant 2 (1 strains)    CCTGCTGTTGATTGGTCTATATTTATTTCTACTTGGAAGCAAGGGCCGGCCAATTATGACACACAGGCATCTGCTGACAGCTTGAAATGTGCTGCCCAAA  700
khr mutant 13 (1 strains)   CCTGCTGTTGATTGGTCTATATTTATTTCTACTTGGAAGCAAGGGCCGGCCAATTATGACACACAGGCATCTGCTGACAACTTGAAATGTGCTGCCCAAA  700
khr mutant 1 (1 strains)    CCTGCTGTTGATTGGTCTATATTTATTTCTACTTGGAAGCAAGGGCCGGCCAATTATGACACACAGGCATCTGCTGACAGCTTGAAATGTGCTGCCCAAA  700
khr mutant 12 (1 strains)   CCTGCTGTTGATTGGTCTATATTTATTTCTACCTGGAAGCAAGGGCCGGCCAATTATGACACACAGGCATCTGCTGACAGCTTGAAATGTGCTGCCCAAA  700
consensus                   !!!!!!!!!!!!!!!!!*!!!!!!!!!!!!!!*!!!!!*!!!!!!*!!!!!!!!!*!!!!!!!!!!!!!!!!!!!!!!!*!!!!!!!!!!!!!!!!!!!!

khr mutant 1 (1 strains)    AAGCACTTGAAAGTGAACACAATCACCAAAAAACAGCTTTCTGTATTCACCTAGATAATGGTGGATCATTTAACTTAGACATTAGGCTAATATCTGAGCT  800
khr mutant 4 (1 strains)    AAGCACTTGAAAGTGAACACAATCACCAAAAAACAGCTTTCTGTATTCACCTAGATAATGGTGGATCATTTAACTTAGACATTAGGCTAATATCTGAGCT  800
khr mutant 3 (1 strains)    AAGCACTTGAAAGTGAACACAATCACCAAAAAACAGCTTTCTGTATTCACCTAGATAATGGTGGATCATTTAACTTAGACATTAGGCTAATATCTGAGCT  800
khr mutant 5 (2 strains)    AAGCACTTGAAAGTGAACACAATCACCAAAAAACAGCTTTCTGTATTCACCTAGATAATGGTGGATCATTTAACTTAGACATTAGGCTAATATCTGAGCT  800
khr mutant 2 (3 strains)    AAGCACTTGAAAGTGAACACAATCACCAAAAAACAGCTTTCTGTATTCACCTAGATAATGGTGGATCATTTAACTTAGACATTAGGCTAATATCTGAGCT  800
khr mutant 9 (19 strains)   AAGCACTTGAAAGTGAACACAATCACCAAAAAACAGCTTTCTGTATTCACCTAGATAATGGTGGATCATTTAACTTAGACATTAGGCTAATATCTGAGCT  800
khr mutant 10 (1 strains)   AAGCACTTGAAAGTGAACACAATCACCAAAAAACAGCTTTCTGTATTCACCTAGATAATGGTGGATCATTTAACTTAGACATTAGGCTAATATCTGAGCT  800
khr mutant 3 (5 strains)    AAGCACTTGAAAGTGAACACAATCACCAAAAAACAGCTTTCTGTATTCACCTAGATAATGGTGGATCATTTAACTTAGACATTAGGCTAATATCTGAGCT  800
khr mutant 8 (2 strains)    AAGCACTTGAAAGTGAACACAATCACCAAAAAACAGCTTTCTGTATTCACCTAGATAATGGTGGATCATTTAACTTAGACATTAGGCTAATATCTGAGCT  800
khr mutant 7 (6 strains)    AAGCACTTGAAAGTGAACACAATCACCAAAAAACAGCTTTCTGTATTCACCTAGATAATGGTGGATCATTTAACTTAGACATTAGGCTAATATCTGAGCT  800
khr mutant 11 (1 strains)   AAGCACTTGAAAGTGAACACAATCACCAAAAAACAGCTTTCTGTATTCACCTAGATAATGGTGGATCATTTAACTTAGACATTAGGCTAATATCTGAGCT  800
khr mutant 6 (1 strains)    AAGCGCTTGAAAGTGAACACAATCACCAAAAAACAGCTTTCTGTATTCACCTAGATAATGGTGGATCGTTTAACTTAGACATTAGGCTAATATCTGAGCT  800
khr mutant 2 (1 strains)    AAGCGCTTGAAAGTGAACACAATCACCAAAAAACAGCTTTCTGTATTCACCTAGATAATGGTGGATCGTTTAACTTAGACATTAGGCTAATATCTGAGCT  800
khr mutant 13 (1 strains)   AAGCGCTTGAAAGTGAACACAATCACCAAAAAACAGCTTTCTGTATTCACCTAGATAATGGTGGATCGTTTAACTTAGACATTAGGCTAATATCTGAGCT  800
khr mutant 1 (1 strains)    AAGCGCTTGAAAGTGAACACAATCACCAAAAAACAGCTTTCTGTATTCACCTAGATAATGGTGGATCGTTTAACTTAGACATTAGGCTAATATCTGAGCT  800
khr mutant 12 (1 strains)   AAGCGCTTGAAAGTGAACACAATCACCAAAAAACAGCTTTCTGTATTCACCTAGATAATGGTGGATCGTTTAACTTAGACATTAGGCTAATATCTGAGCT  800
consensus                   !!!!*!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!*!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
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khr mutant 1 (1 strains)    TTCATTTTCGAAATATAACCCATGGGCTCTTCCATGTCCGAAGGACAAAGGCTCCAATTCTTGGCAAGTTGTGAGCGACTGTTTTCAATAA   891
khr mutant 4 (1 strains)    TTCATTTTCGAAATATAACCCATGGGCTCTTCCATGTCCGAAGGACAAAGGCTCCAATTCTTGGCAAGTTGTGAGCGACTGTTTTCAATAA   891
khr mutant 3 (1 strains)    TTCATTTTCGAAATATAACCCATGGGCTCTTCCATGTCCGAAGGACAAAGGCTCCAATTCTTGGCAAGTTGTGAGCGACTGTTTTCAATAA   891
khr mutant 5 (2 strains)    TTCATTTTCGAAATATAACCCATGGGCTCTTCCATGTCCGAAGGACAAAGGCTCCAATTCTTGGCAAGTTGTGAGCGACTGTTTTCAATAA   891
khr mutant 2 (3 strains)    TTCATTTTCGAAATATAACCCATGGGCTCTTCCATGTCCGAAGGACAAAGGCTCCAATTCTTGGCAAGTTGTGAGCGACTGTTTTCAATAA   891
khr mutant 9 (19 strains)   TTCATTTTCGAAATATAACCCATGGGCTCTTCCATGTCCGAAGGACAAAGGCTCCAATTCTTGGCAAGTTGTGAGCGACTGTTTTCAATAA   891
khr mutant 10 (1 strains)   TTCATTTTCGAAATATAACCCATGGGCTCTTCCATGTCCGAAGGACAAAGGCTCCAATTCTTGGCAAGTTGTGAGCGACTGTTTTCAATAA   891
khr mutant 3 (5 strains)    TTCATTTTCGAAATATAACCCATGGGCTCTTCCATGTCCGAAGGACAAAGGCTCCAATTCTTGGCAAGTTGTGAGCGACTGTTTTCAATAA   891
khr mutant 8 (2 strains)    TTCATTTTCGAAATATAACCCATGGGCTCTTCCATGTCCGAAGGACAAAGGCTCCAATTCTTGGCAAGTTGTGAGCGACTGTTTTCAATAA   891
khr mutant 7 (6 strains)    TTCATTTTCGAAATATAACCCATGGGCTCTTCCATGTCCGAAGGACAAAGGCTCCAATTCTTGGCAAGTTGTGAGCGACTGTTTTCAATAA   891
khr mutant 11 (1 strains)   TTCATTTTCGAAATATAACCCATGGGCTCTTCCATGTCCGAAGGACAAAGGCTCCAATTCTTGGCAAGTTGTGAGCGACTGTTTTCAATAA   891
khr mutant 6 (1 strains)    TTCATTTTCGAAATATAACCCATGGGCTCTTCCATGTCCGAAGGACAAAGACTCAAATTCTTGGCAGGTTGTGAGCGACTGTTTTCAATAA   891
khr mutant 2 (1 strains)    TTCATTTTCGAAATATAACCCATGGGCTCTTCCATGTCCGAAGGACAAAGACTCAAATTCTTGGCAGGTTGTGAGCGACTGTTTTCAATAA   891
khr mutant 13 (1 strains)   TTCATTTTCGAAATATAACCCATGGGCTCTTCCATGTCCGAAGGACAAAGACTCAAATTCTTGGCAGGTTGTGAGCGACTGTTTTCAATAA   891
khr mutant 1 (1 strains)    TTCATTTTCGAAATATAACCCATGGGCTCTTCCATGTCCGAAGGACAAAGACTCAAATTCTTGGCAGGTTGTGAGCGACTGTTTTCAATAA   891
khr mutant 12 (1 strains)   TTCATTTTCGAAATATAACCCATGGGCTCTTCCATGTCCGAAGGACAAAGACTCAAATTCTTGGCAGGTTGTGAGCGACTGTTTTCAATAA   891
consensus                   !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!*!!!*!!!!!!!!!!!*!!!!!!!!!!!!!!!!!!!!!!!!
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X non-conserved

X similar

X ≥ 50% conserved