a

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                    1         10        20        30        40        50        60        70        80  CDR1  90       100       110       120
UCA     CAGACTGTGGTGACTCAGGAGCCCTCACTGACTGTGTCCCCAGGAGGGACAGTCACTCTCACCTGTGCTTCCAGCACTGGAGCAGTCACCAGTGGTTACTATCCAAACTGGTTCCAGCAG
MGC34   ......................................................................T.......................................G.........C...
MGC5    ......................................................................A......C.T..........C.......................................
MGC29   ......................................................................A......C.T..........C.......................................
MGC35   .............................................................................C.T..........C.......................................
MGC4    ...........T.................................................................C.T..........C.......................................
MGC36   ...........T.................................................................C.T..........C.......................................
MGC28   ......................................................................T......T...............C..T.......................
MGC33   ......................................................................T......T...............C..T.......................

                  130       140       150  CDR2 160       170       180       190       200       210       220       230       240
UCA     AAACCTGGACAAGCACCCAGGGCACTGATTTATAGTACAAGCAACAAACACTCCTGGACCCCTGCCCGGTTCTCAGGCTCCCTCCTTGGGGGCAAAGCTGCCCTGACACTGTCAGGTGTG
MGC34   .............C..GT.................................A.C.....................C.....................................AA...C
MGC5    ..G...................T.T..T.......A..T..A...A.....................................................................A
MGC29   ..G...................T.T..T.......A..T..A...A.....................................................................A
MGC35   ..G...................T.T..T.......A..T..A...A.....................A.....................................................A
MGC4    ..G...................T.T..T.......T..T..A...A.....................................................................A
MGC36   ..G...................T.T..T.......T..T..A...A.....................................................................A
MGC28   .C....................T.............C...A........T.............................T.............................G......A.ACA
MGC33   .C....................T.............C...A........T.............................T.............................G......A.ACA

                  250       260       270       280  CDR3 290       300       310       320       330
UCA     CAGCCTGAGGACGAGGCTGAGTATTACTGCCTGCTCTACTATGGTGGTGCTCAGCCTTGGGTGTTCGGCGGAGGGACCAAGCTGACCGTCCAAG
MGC34   ....................C..........T.........C...............................................
MGC5    ....................C.........C..G.......................................................
MGC29   ....................C.........C..G.......................................................
MGC35   ....................C.........C..G.......................................................
MGC4    ....................C.........C..G.......................................................
MGC36   ....................C.........C..G.......................................................
MGC28   .....G.......................A.......G........G...A.........................T..
MGC33   .....G.......................A.......G........G...A.........................
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b

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                    1         10        20        30        40        50        60        70        80        90  CDR1 100       110       120
UCA     GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCT
MGC1    ......................................................................T...................G.....G.............
MGC32   ......C.C.....................................................................T...................G.....G.............
MGC17   ..................A.....T.....................................................T...................G.....G........A..T.....

                  130       140       150       160  CDR2 170       180       190       200       210       220       230       240
UCA     TGGTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTACCCGGGAATCCGGGGTCCCTGACCGATTCAGTGGCAGCGGGTCTGGGACAGATTTCACTCTCACC
MGC1    ....T.............................G............C.A.......T....CG.......................C.......................................
MGC32   ....T.............................G............C.A.......T....CG.......................C.......................................
MGC17   ....T........G....................G.T..........A.....T....CG.....................................................

                  250       260       270       280       290  CDR3 300       310       320       330       340
UCA     ATCAGCAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGGCCAGGGGACCAAGCTGGAGATCAAAC
MGC1    ..............................................T............T......C.....................T.............
MGC32   ..............................................T............T......C.....................T.............
MGC17   ....................T..................T...........G....T..T.TT.............................T..........G..
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c

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                    1         10        20        30        40        50        60        70        80  CDR1  90       100       110       120
UCA     GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATCTGTAGGAGACAGAGTCACCATCACTTGCCGGGCCAGTCAGAGTATTAGTAGCTGGTTGGCCTGGTATCAGCAGAAACCA
MGC26   .........C....................................................T...............C..C.....C...C.....................G....
MGC37   .........T....................................................T...............C..C.....C...C.....................G....
MGC2    ..............................................G...................T...............C..T.....G.....

                  130       140       150  CDR2 160       170       180       190       200       210       220       230       240
UCA     GGGAAAGCCCCTAAGCTCCTGATCTATAAGGCGTCTAGTTTAGAAAGTGGGGTCCCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGAATTCACTCTCACCATCAGCAGCCTGCAGCCT
MGC26   C.............C.........................CC........T.....G...............C.......................................
MGC37   C.............C.........................CC........T.....G...............C.......................................
MGC2    ..............C.........................CC.....C.G......G.....................................C.......................

                  250       260       270  CDR3 280       290       300       310       320
UCA     GATGATTTTGCAACTTATTACTGCCAACAGTATAATAGTTATTCATACACTTTTGGCCAGGGGACCAAGCTGGAGATCAGAC
MGC26   .......C.................A..C.G..A.........T.G.....................................
MGC37   .......C.................A..C.G..A.........T.G.....................................
MGC2    .......C.................C..C.G..A.........T.......................................
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d

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                    1         10        20        30        40        50        60        70        80  CDR1  90       100       110       120
UCA     GCCATCCGGATGACCCAGTCTCCATCCTCATTCTCTGCATCTACAGGAGACAGAGTCACCATCACTTGTCGGGCGAGTCAGGGTATTAGCAGTTATTTAGCCTGGTATCAGCAAAAACCA
MGD56   ...............................C...................G.....................................C.....C.......................G...G.......
MGD21   ...............................C...........AC....G....A.....G.....................ACA.....ATGA..C...G.......T...A....GG...
MGD34   ...............................C...........AC....G....A.....G.....................ACA.....ATGA..C...G.......T...A....GG...
MGD30   .........T.......A.............C.............T.....................................A.......C..T...G.............A...G.GT..
MGD33   .........T.......A.............C.............T.....................................A.......C.....G.............A...G.GT..
MGD24   ...........................T...C.G.....G...GA.....G...............T.................C.A...A..T.A...C....AT.........C..G.......
MGD53   ...........................T..TC.G.....G.....G.....................T.................A.A...AG.T.A...C....AT.........C...G.....
MGD41   ...............................C.G.......T.....................T....C.................A....G.T.A...C....AT.........C.....G...
MGD39   .......................G.G..TC.G..........T.....................A.......................T.A.G..G.T.A.........AT.........A.........
MGD55   .......................G.G..TC.G..........T.....................A.......................A.G..G.T.A.........AT.........A.........
MGD47   .......................G.G..CC.G.........GT.....................A.......................A.G..G.A.A.........AT.........A.........
MGD23   ...G.....G...............A....C.G.........................................A.......ATA.G..G.G.A.........AT.........A.........
MGD16   ...........................TA..C.G.........G.....................................A.G....A.A.........AT.........A.........

                  130       140       150  CDR2 160       170       180       190       200       210       220       230       240
UCA     GGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCGACTTTGCAAAGTGGGGTCCCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCTGCCTGCAGTCT
MGD56   .............G.C.............AA...T.....................................A.......C......C...............G.............C.G.........
MGD21   ...........A..A........A....G.......A......C...............G...............C...G..A.....................T....C.G.........
MGD34   ...........A..A........A....G.......A......C...............G...............C...G..A.....................T....C.G.........
MGD30   ..T........A.G......A....T.........T.....A....C.........T.....................................................G.......A...
MGD33   ..T........A.G......A....T.........T.G...A....C.........T.....................................................G.........
MGD24   ..C.G.....................C...G.......G..C....G.C.........G...C.........GG..A....C..AG.........T.....A.....C.........C...
MGD53   ..A.G.....................C...G.......G..C....G.C.........G...C...............A....C..A...............A.....C.............
MGD41   ..A.G.....................C...G.........TG.C.............C.A.................C..A...............A.....C.............
MGD39   ..A...........A.........C.C.G...G...........C.............C.................G.C...............A.....C.............
MGD55   ..A...........A.........C.C.G...G...........C.............C.................G.C...............A.....C.............
MGD47   ..A...........A....C...C.C.G...G.........GC.............C.T....A............C...................GG......T..TG.........
MGD23   ..............A.....C..TC.C.G..T...........A.....................T.......CC..C.........C...........A.....C......A......
MGD16   ......................C.C.GC.....................................C.G.......A.....T.....................................

                  250       260       270  CDR3 280       290       300       310       320
UCA     GAAGATTTTGCAACTTATTACTGTCAACAGTATTATAGTTACCCTCCGGACTTCGGCCAAGGGACACGACTGGAGATTAAAC
MGD56   ..G........T..T.....T...C.....C.........C.............C.....................................G
MGD21   ...................T.........G.A..T...T.....................................................
MGD34   ...................T.........G.A..T...T.....................................................
MGD30   ...................................T...T.....................................C.......
MGD33   ...................................A.....T...T.....................................C.......
MGD24   .G........G..T......T....T...A.....C....C.........C.....................C.....GA
MGD53   .G........G.CT......T....T...A.....C....C.........C.....................G...C.....GA
MGD41   .G........G..T.........T...A.....C....C.........C.........C...........G.....GA
MGD39   .G......C....TG.....T.........A.....C....C.........G.....................A.....GA
MGD55   .G......C....TG.....T.........A.....C....C.........G.....................A.....GA
MGD47   .G......C..G.TC.....T.........A.....C.C..C.........T.....................
MGD23   ......C...................G.....C..C.....................C.....A.....GA
MGD16   ......G......T.....TT...T...A.....C.....T..G.....G.....A.....A
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