

>B2-19-VH (SEQ ID NO: 1)

QVQLVQSGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDGGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-VL (SEQ ID NO: 2)

QPVLTQPPSVSEAPRQRVTISCSGSSSNIGNNVVNWYQQLPGKAPKLLIYYDDLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDDSLNGPVFGGGTKLTVL

>B2-19-1-VH (SEQ ID NO: 3)

QVQLVQSGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTEGGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-1-VL (SEQ ID NO: 4)

QPVLTQPPSVSEAPRQRVTISCSGSSSNIGNNVVNWYQQLPGKAPKLLIYYDDLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDDSLNGPVFGGGTKLTVL

>B2-19-2-VH (SEQ ID NO: 5)

QVQLVQSGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTQGGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-2-VL (SEQ ID NO: 6)

QPVLTQPPSVSEAPRQRVTISCSGSSSNIGNNVVNWYQQLPGKAPKLLIYYDDLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDDSLNGPVFGGGTKLTVL

>B2-19-3-VH (SEQ ID NO: 7)

QVQLVQSGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDGGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-3-VL (SEQ ID NO: 8)

QPVLTQPPSVSEAPRQRVTISCSGSSSNIGNNVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDDSLNGPVFGGGTKLTVL

Figure 1

>B2-19-4-VH (SEQ ID NO: 9)

QVQLVQSGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDGGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-4-VL (SEQ ID NO: 10)

QPVLTQPPSVSEAPRQRVTISCSGSSSNIGNNVVNWYQQLPGKAPKLLIYYDELLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDDSLNGPVFGGGTKLTVL

>B2-19-5-VH (SEQ ID NO: 11)

QVQLVQSGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDGGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-5-VL (SEQ ID NO: 12)

QPVLTQPPSVSEAPRQRVTISCSGSSSNIGNNVVNWYQQLPGKAPKLLIYYDDLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLNGPVFGGGTKLTVL

>B2-19-6-VH (SEQ ID NO: 13)

QVQLVQSGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDGGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-6-VL (SEQ ID NO: 14)

QPVLTQPPSVSEAPRQRVTISCSGSSSNIGNNVVNWYQQLPGKAPKLLIYYDDLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDQSLNGPVFGGGTKLTVL

>B2-19-7-VH (SEQ ID NO: 15)

QVQLVQSGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDGGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-7-VL (SEQ ID NO: 16)

QPVLTQPPSVSEAPRQRVTISCSGSSSNIGNNVVNWYQQLPGKAPKLLIYYDDLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDDSLNGPVFGGGTKLTVL

Figure 1 (continue)

>B2-19-8-VH (SEQ ID NO: 17)

QVQLVQSGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDGGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-8-VL (SEQ ID NO: 18)

QPVLTPPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYDDLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDDSLNGPVFGGGTKLTVL

>B2-19-9-VH (SEQ ID NO: 19)

QVQLVQSGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDGGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSFYSPAFDIWGQGTTVSVSS

>B2-19-9-VL (SEQ ID NO: 20)

QPVLTPPPSVSEAPRQRVTISCSGSSSNIGNNVVNWYQQLPGKAPKLLIYYDDLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDDSLNGPVFGGGTKLTVL

>B2-19-10-VH (SEQ ID NO: 21)

QVQLVQSGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDGGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-10-VL (SEQ ID NO: 22)

QPVLTPPPSVSEAPRQRVTISCSGSSSNIGNNVVNWYQQLPGKAPKLLIYYDDLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATFDDSLNGPVFGGGTKLTVL

>B2-19-11-VH (SEQ ID NO: 23)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDGGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-11-VL (SEQ ID NO: 24)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGNNVVNWYQQLPGKAPKLLIYYDDLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDDSLNGPVFGGGTKLTVL

Figure 1 (continue)

>B2-19-12-VH (SEQ ID NO: 25)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDGGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-12-VL (SEQ ID NO: 26)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLNGPVFGGGTKLTVL

>B2-19-14-VH (SEQ ID NO: 27)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDGGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-14-VL (SEQ ID NO: 28)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

>B2-19-15-VH (SEQ ID NO: 29)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTEGGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-15-VL (SEQ ID NO: 30)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

>B2-19-16-VH (SEQ ID NO: 31)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-16-VL (SEQ ID NO: 32)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

Figure 1 (continue)

>B2-19-17-VH (SEQ ID NO: 33)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTSGGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-17-VL (SEQ ID NO: 34)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

>B2-19-18-VH (SEQ ID NO: 35)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTGGGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-18-VL (SEQ ID NO: 36)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

>B2-19-20-VH (SEQ ID NO: 37)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-20-VL (SEQ ID NO: 38)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGSVFGGGTKLTVL

>B2-19-21-VH (SEQ ID NO: 39)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-21-VL (SEQ ID NO: 40)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGYVFGGGTKLTVL

Figure 1 (continue)

>B2-19-22-VH (SEQ ID NO: 41)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-22-VL (SEQ ID NO: 42)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLYGPVFGGGTKLTVL

>B2-19-23-VH (SEQ ID NO: 43)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-23-VL (SEQ ID NO: 44)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENAVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

>B2-19-24-VH (SEQ ID NO: 45)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-24-VL (SEQ ID NO: 46)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYEEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

>B2-19-25-VH (SEQ ID NO: 47)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-25-VL (SEQ ID NO: 48)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDTLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

Figure 1 (continue)

>B2-19-26-VH (SEQ ID NO: 49)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGEIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-26-VL (SEQ ID NO: 50)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

>B2-19-28-VH (SEQ ID NO: 51)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGSIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-28-VL (SEQ ID NO: 52)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

>B2-19-30-VH (SEQ ID NO: 53)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRISSKTDGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-30-VL (SEQ ID NO: 54)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

>B2-19-31-VH (SEQ ID NO: 55)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSSTDGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-31-VL (SEQ ID NO: 56)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

Figure 1 (continue)

>B2-19-32-VH (SEQ ID NO: 57)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDEYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-32-VL (SEQ ID NO: 58)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

>B2-19-34-VH (SEQ ID NO: 59)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-34-VL (SEQ ID NO: 60)

DIQMTQSPSSLSASVGDRVTITCSGSSSNIGENVVNWYQKPGKAPKLLIYYEDLLPSGVPSRFSGSK
SGTSATLTISLQPEDFATYYCATWDESLSGPVFGQGTKVEIK

>B2-19-35-VH (SEQ ID NO: 61)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-35-VL (SEQ ID NO: 62)

EIVLTQSPGTLSPGERATLSCSGSSSNIGENVVNWYQKPGQAPRLIYYEDLLPSGIPDRFSGSK
SGTSATLTISRLEPEDFAVYYCATWDESLSGPVFGQGTKVEIK

>B2-19-36-VH (SEQ ID NO: 63)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-36-VL (SEQ ID NO: 64)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGQNVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDQSLSGPVFGGGTKLTVL

Figure 1 (continue)

>B2-19-37-VH (SEQ ID NO: 65)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-37-VL (SEQ ID NO: 66)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGQNVVNWYQQLPGKAPKLLIYYADLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDQSLSGPVFGGGTKLTVL

>B2-19-38-VH (SEQ ID NO: 67)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-38-VL (SEQ ID NO: 68)

QSALTQPASVSGSPGQSITISCSGSSSNIGENVVNWYQQHPGKAPKLLIYYEDLLPSGVSNRFSGSKS
GNTASLTISGLQAEDEADYYCATWDESLSGPVFGGGTKLTVL

>B2-19-39-VH (SEQ ID NO: 69)

EVQLLESGGGLVQPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDNKNTLYLQMNSLRAEDTAVYYCTTDYSSSWYSPAFDIWGQGTLLTVSS

>B2-19-39-VL (SEQ ID NO: 70)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

>B2-19-40-VH (SEQ ID NO: 71)

EVQLLESGGGLVQPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDNKNTLYLQMNSLRAEDTAVYYCTTDYSSSWYSPAFDIWGQGTLLTVSS

>B2-19-40-VL (SEQ ID NO: 72)

QSALTQPASVSGSPGQSITISCSGSSSNIGENVVNWYQQHPGKAPKLLIYYEDLLPSGVSNRFSGSKS
GNTASLTISGLQAEDEADYYCATWDESLSGPVFGGGTKLTVL

Figure 1 (continue)

>B2-19-41-VH (SEQ ID NO: 73)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-41-VL (SEQ ID NO: 74)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDEGLSGPVFGGGTKLTVL

>B2-19-42-VH (SEQ ID NO: 75)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-42-VL (SEQ ID NO: 76)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDENLSGPVFGGGTKLTVL

>B2-19-43-VH (SEQ ID NO: 77)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-43-VL (SEQ ID NO: 78)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESASGPVFGGGTKLTVL

>B2-19-44-VH (SEQ ID NO: 79)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-44-VL (SEQ ID NO: 80)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESGSPVFGGGTKLTVL

Figure 1 (continue)

>B2-19-45-VH (SEQ ID NO: 81)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-45-VL (SEQ ID NO: 82)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESKSGPVFGGGTKLTVL

>B2-19-46-VH (SEQ ID NO: 83)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-46-VL (SEQ ID NO: 84)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESTSGPVFGGGTKLTVL

>B2-19-48-VH (SEQ ID NO: 85)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-48-VL (SEQ ID NO: 86)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

>B2-19-49-VH (SEQ ID NO: 87)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-49-VL (SEQ ID NO: 88)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENFVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

Figure 1 (continue)

>B2-19-50-VH (SEQ ID NO: 89)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAYMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-50-VL (SEQ ID NO: 90)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

>B2-19-51-VH (SEQ ID NO: 91)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNADMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-51-VL (SEQ ID NO: 92)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

>B2-19-52-VH (SEQ ID NO: 93)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNANMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-52-VL (SEQ ID NO: 94)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

>B2-19-53-VH (SEQ ID NO: 95)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-53-VL (SEQ ID NO: 96)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESYSGPVFGGGTKLTVL

Figure 1 (continue)

>B2-19-54-VH (SEQ ID NO: 97)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-54-VL (SEQ ID NO: 98)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPTFGGGTKLTVL

>B2-19-55-VH (SEQ ID NO: 99)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVQG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-55-VL (SEQ ID NO: 100)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

>B2-19-56-VH (SEQ ID NO: 101)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWYSPAFDIWGQGTTVSVSS

>B2-19-56-VL (SEQ ID NO: 102)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

>B2-19-57-VH (SEQ ID NO: 103)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDRESSSWYSPAFDIWGQGTTVSVSS

>B2-19-57-VL (SEQ ID NO: 104)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

Figure 1 (continue)

>B2-19-58-VH (SEQ ID NO: 105)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDRHSSSWYSPAFDIWGQGTTVSVSS

>B2-19-58-VL (SEQ ID NO: 106)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

>B2-19-59-VH (SEQ ID NO: 107)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDRPSSSWYSPAFDIWGQGTTVSVSS

>B2-19-59-VL (SEQ ID NO: 108)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

>B2-19-60-VH (SEQ ID NO: 109)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWESPAFDIWGQGTTVSVSS

>B2-19-60-VL (SEQ ID NO: 110)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

>B2-19-61-VH (SEQ ID NO: 111)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWHSPAFDIWGQGTTVSVSS

>B2-19-61-VL (SEQ ID NO: 112)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

Figure 1 (continue)

>B2-19-62-VH (SEQ ID NO: 113)

EVQLVESGGGLVKPGGSLRLSCAASGFTFSNAWMSWVRQAPGKGLEWVGRIKSKTDTGTTDYAAPVKG
RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWPSPAFDIWGQGTTVSVSS

>B2-19-62-VL (SEQ ID NO: 114)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

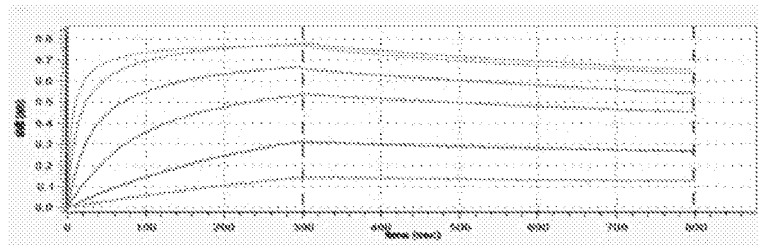
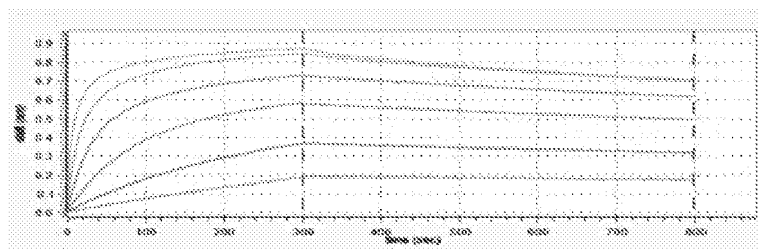
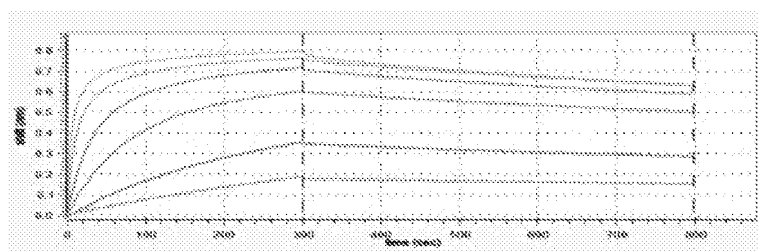
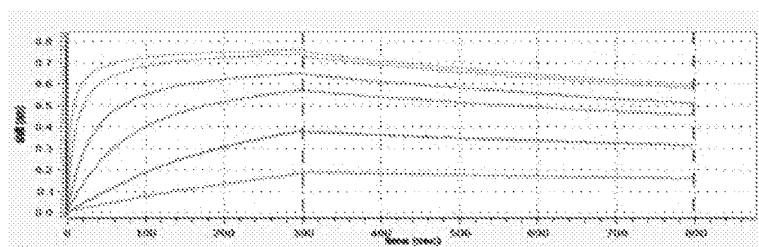
>B2-19-63-VH (SEQ ID NO: 115)

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RFTISRDDSKNTLYLQMNSLKTEDTAVYYCTTDYSSSWQSPAFDIWGQGTTVSVSS

>B2-19-63-VL (SEQ ID NO: 116)

QSVLTQPPSVSEAPRQRVTISCSGSSSNIGENVVNWYQQLPGKAPKLLIYYEDLLPSGVSDRFSGSKS
GTSASLAISGLQSEDEADYYCATWDESLSGPVFGGGTKLTVL

Figure 1 (continue)

B2-19**B2-19-12****B2-19-16**

Antibody	K_D (nM)
B2-19	2.1
B2-19-12	2.0
B2-19-16	1.97

Figure 2

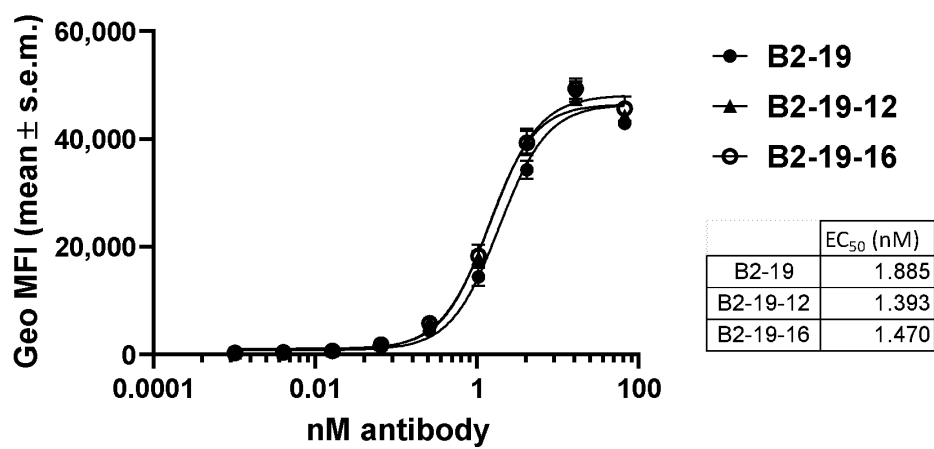


Figure 3

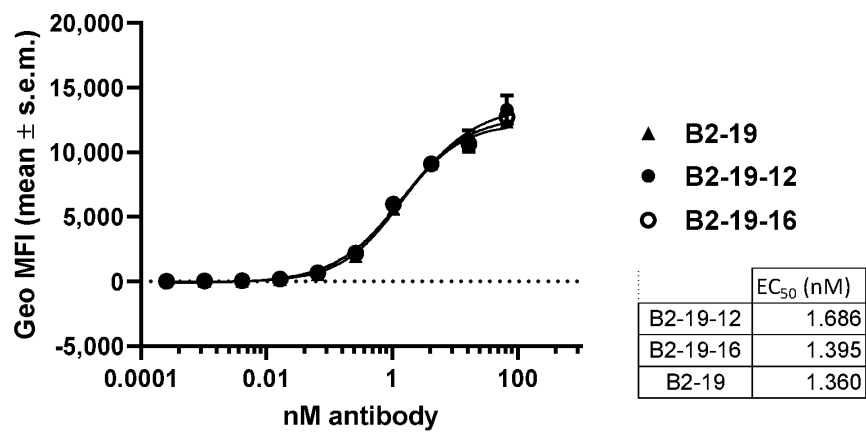


Figure 4

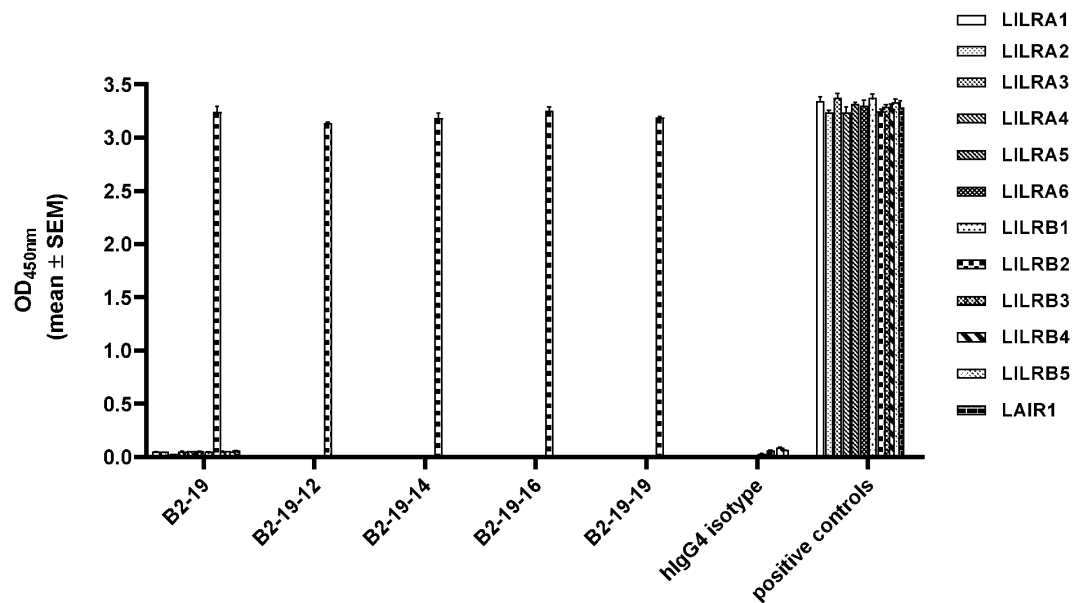


Figure 5

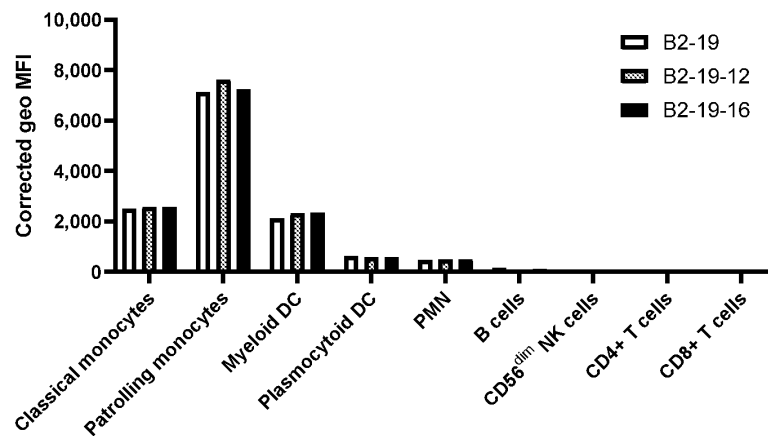


Figure 6

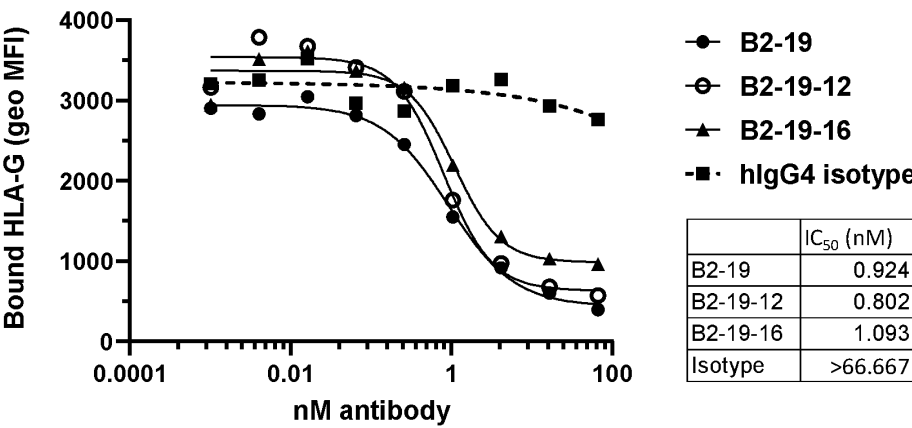


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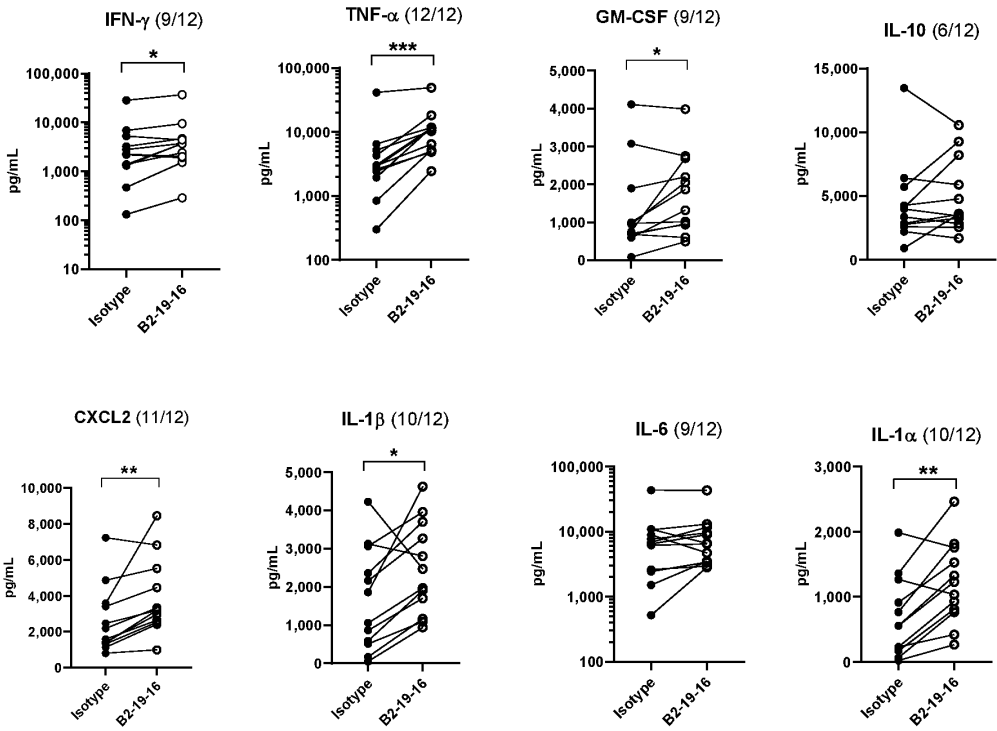


Figure 8A

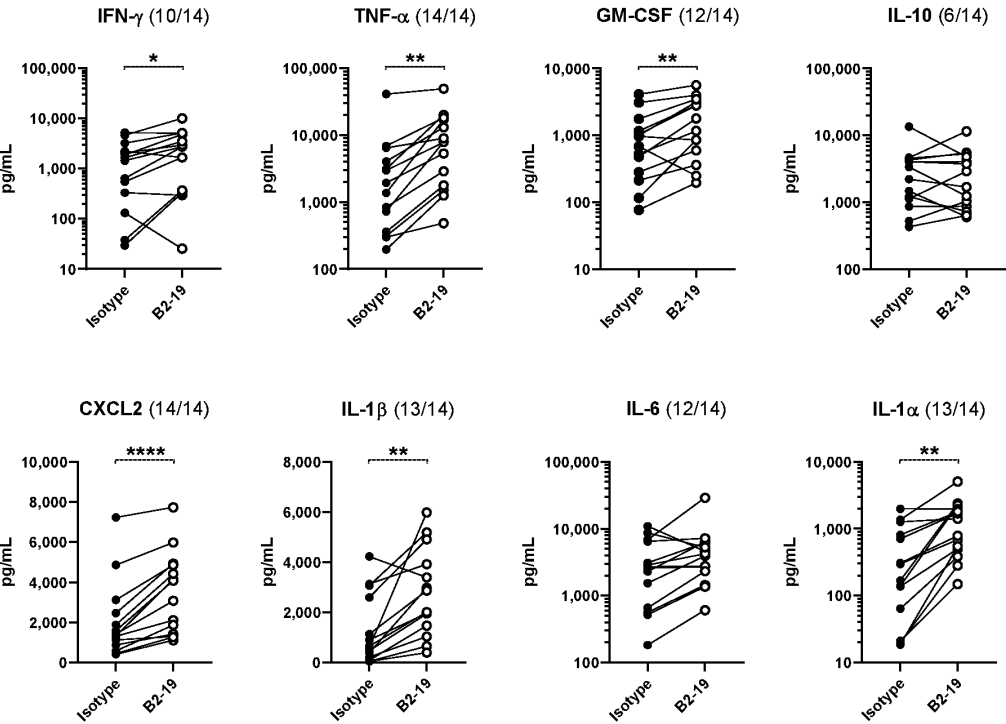


Figure 8B

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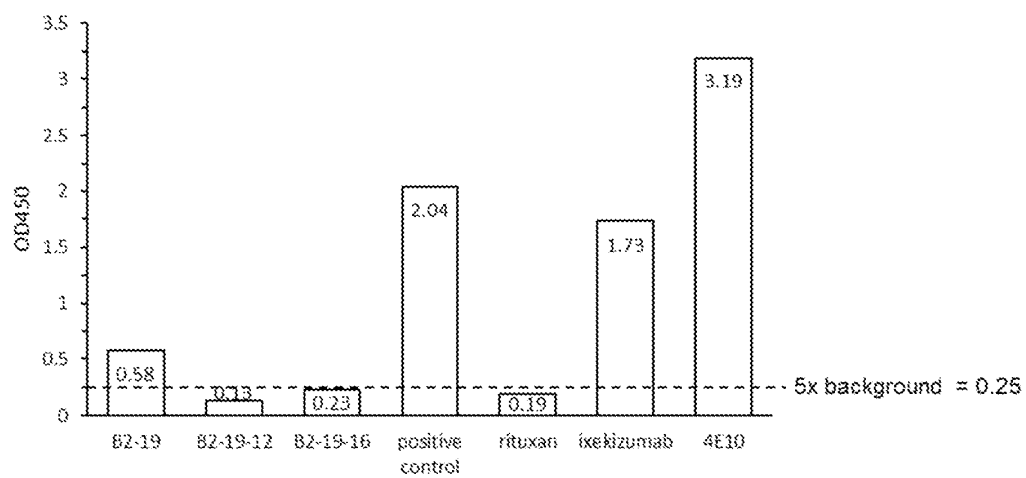
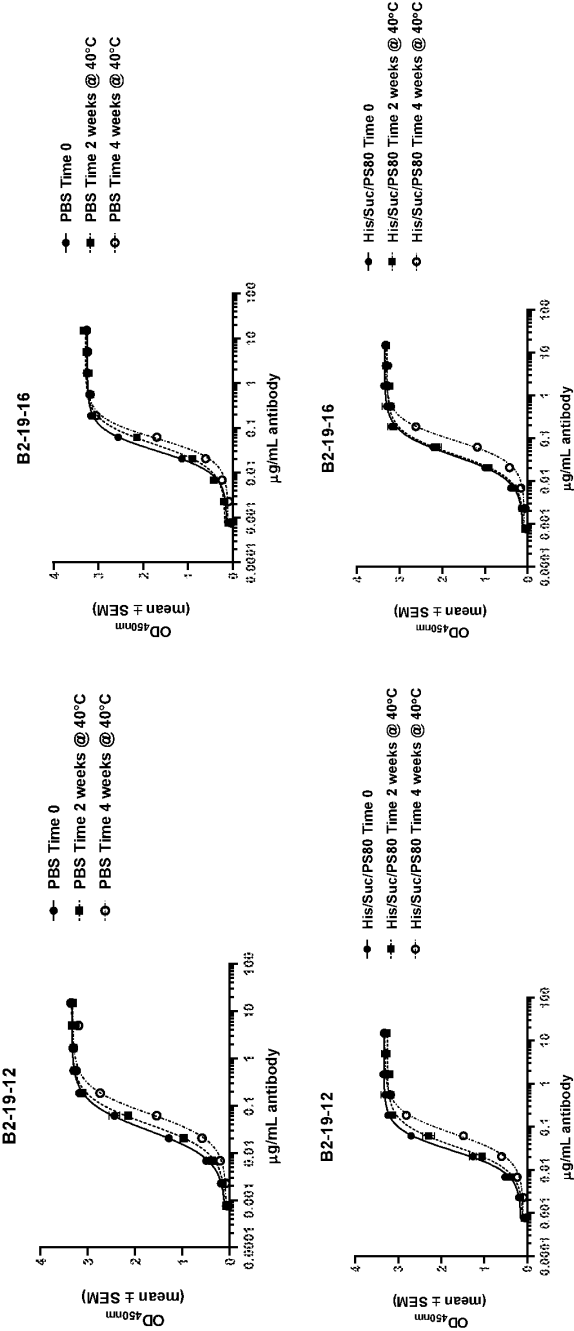
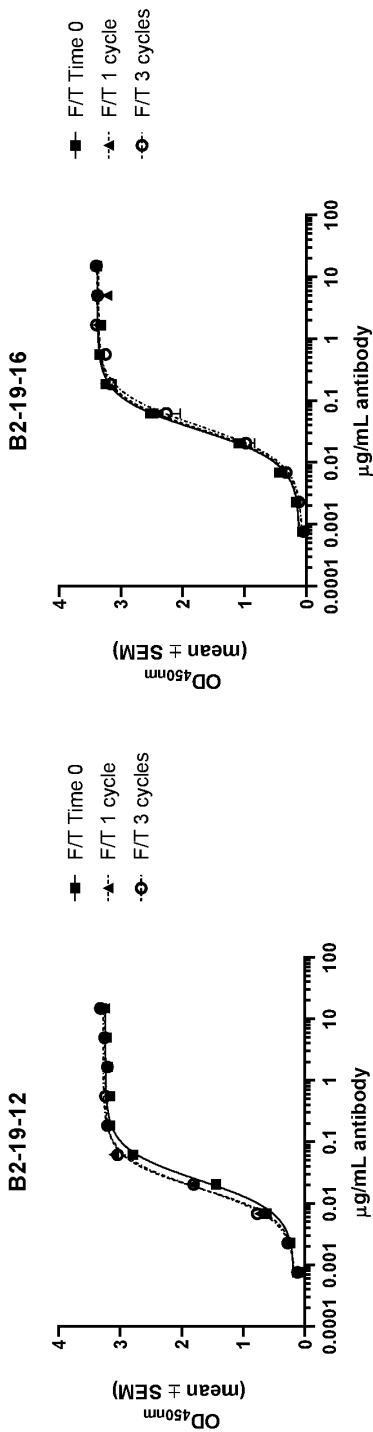


Figure 9



Condition	EC ₅₀ (µg/mL)	
	B2-19-12	B2-19-16
PBS Time 0	0.030	0.030
PBS Time 2 weeks @ 40°C	0.041	0.043
PBS Time 4 weeks @ 40°C	0.068	0.058
His/Suc/PS80 Time 0	0.028	0.039
His/Suc/PS80 Time 2 weeks @ 40°C	0.035	0.041
His/Suc/PS80 Time 4 weeks @ 40°C	0.069	0.088

Figure 10



Condition	EC ₅₀ (μg/mL)	
	B2-19-12	B2-19-16
F/T Time 0	0.024	0.034
F/T 1 cycle	0.018	0.035
F/T 3 cycles	0.018	0.039

Figure 11

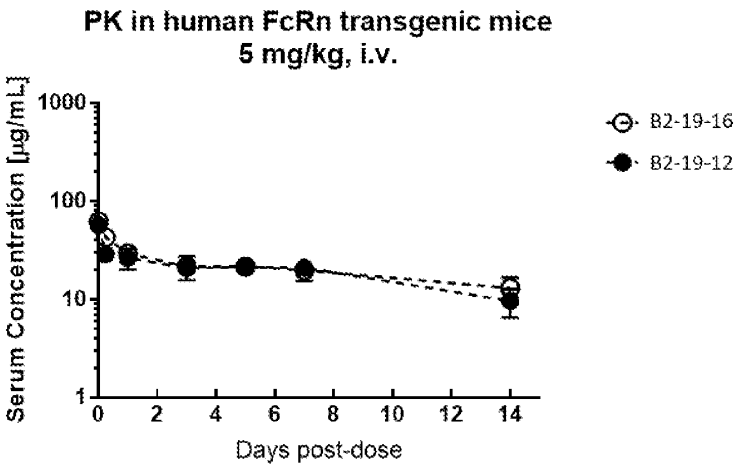


Figure 12

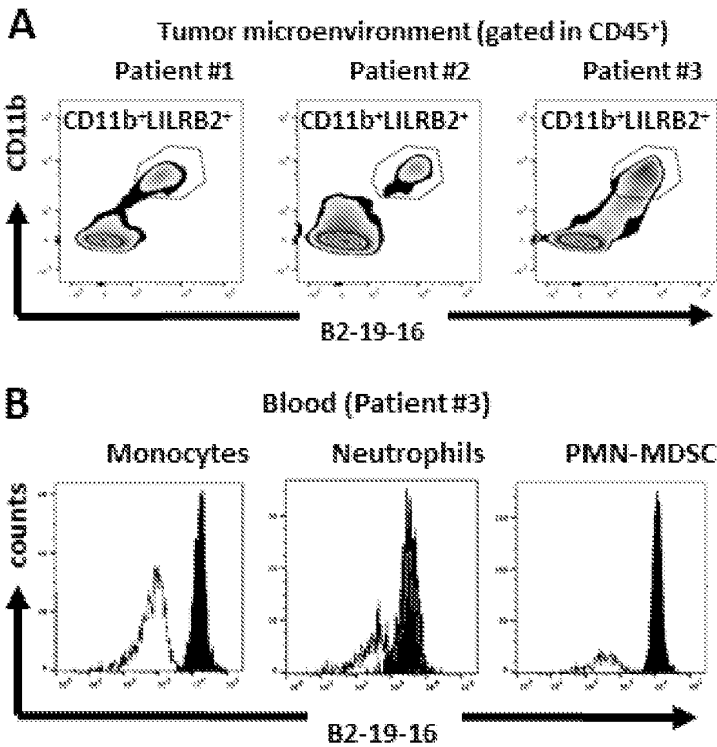


Figure 13

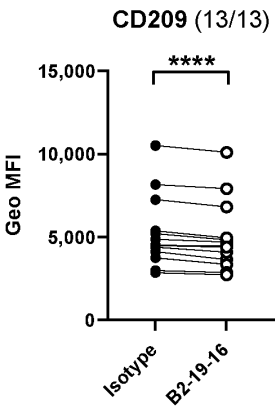


Figure 14

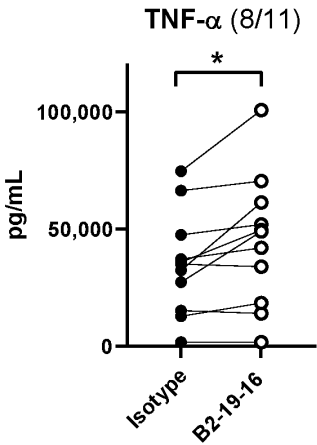


Figure 15

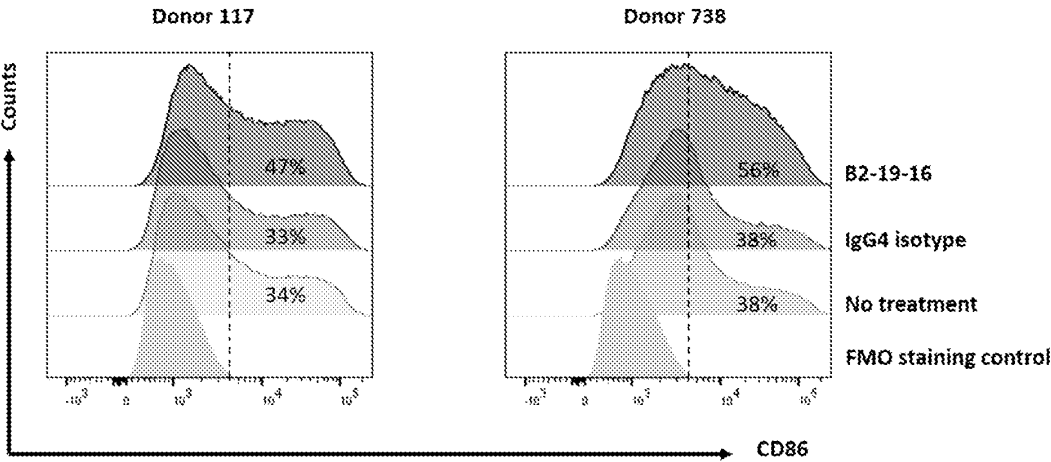


Figure 16A

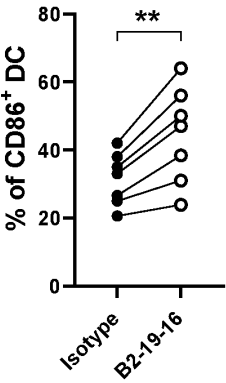


Figure 16B

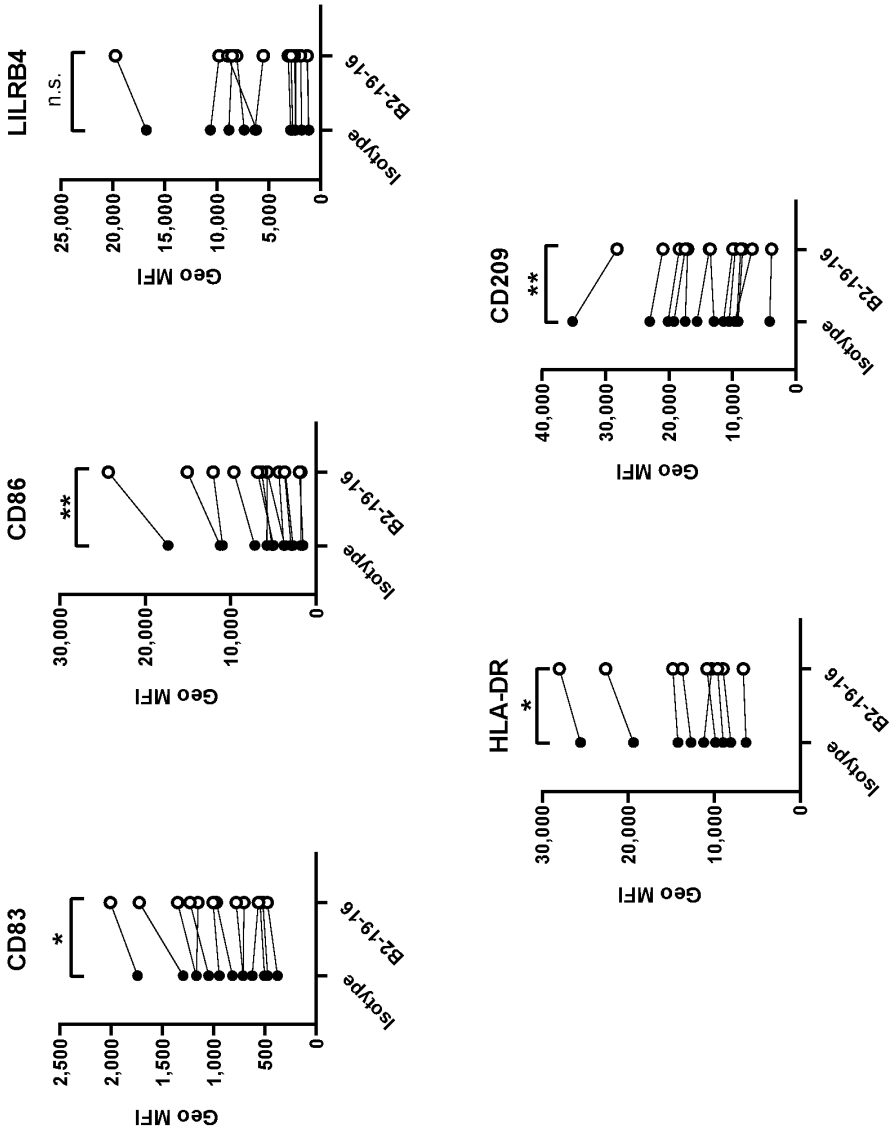


Figure 17

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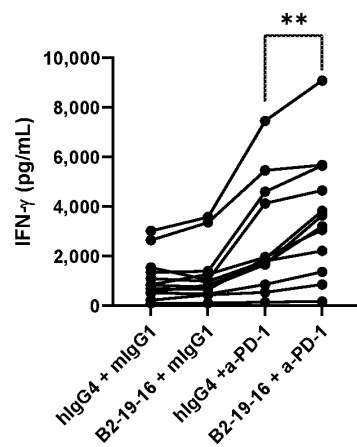


Figure 18

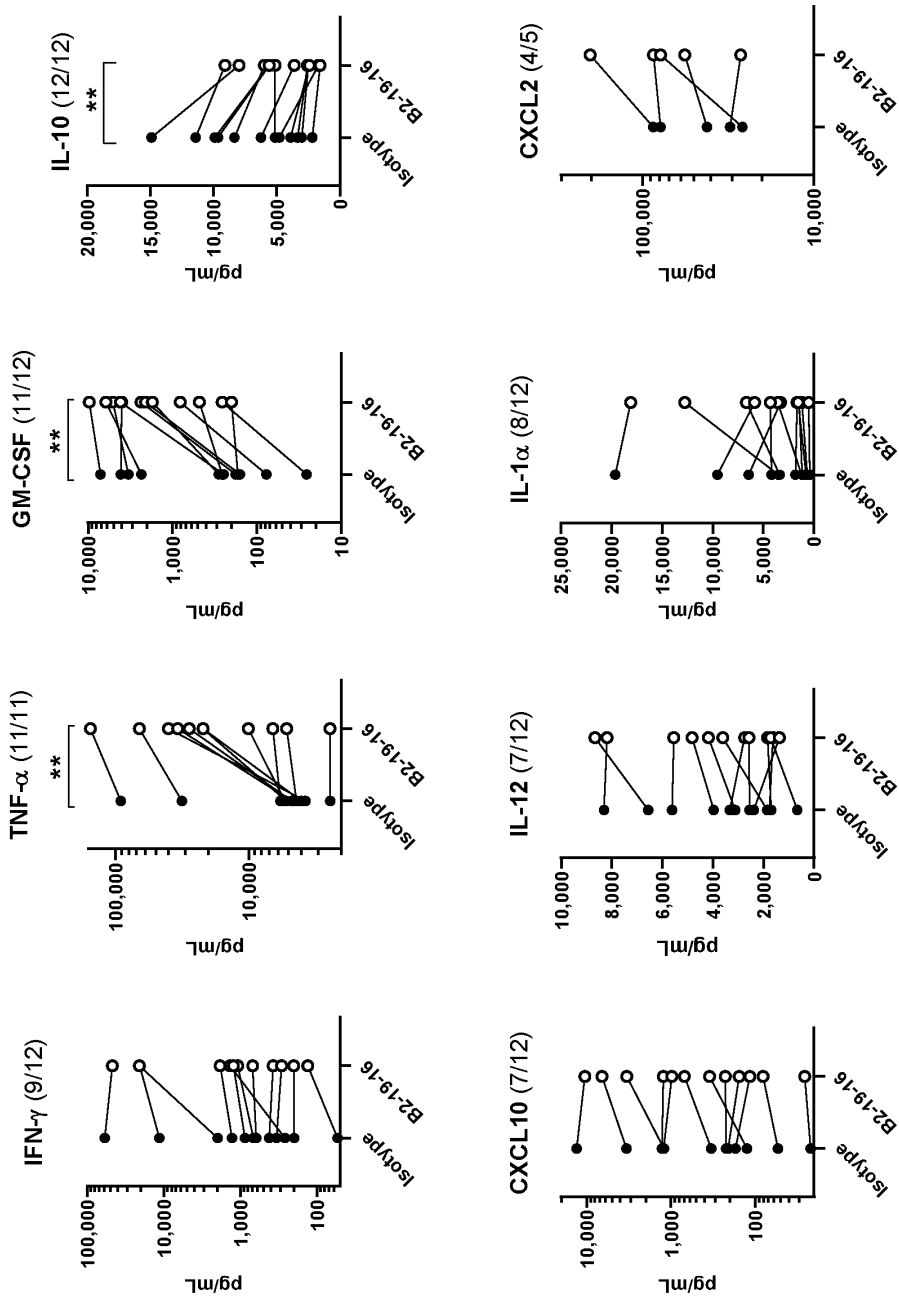


Figure 19

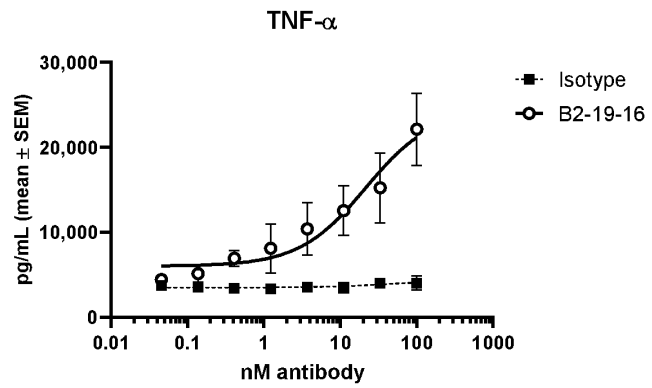


Figure 20

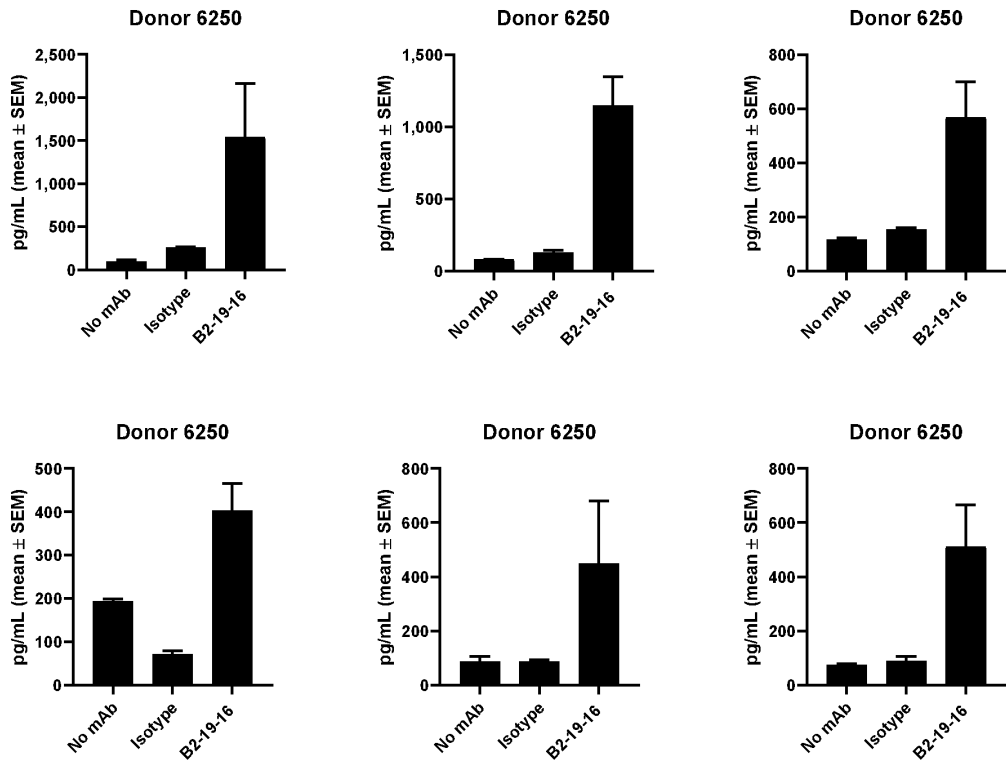


Figure 21

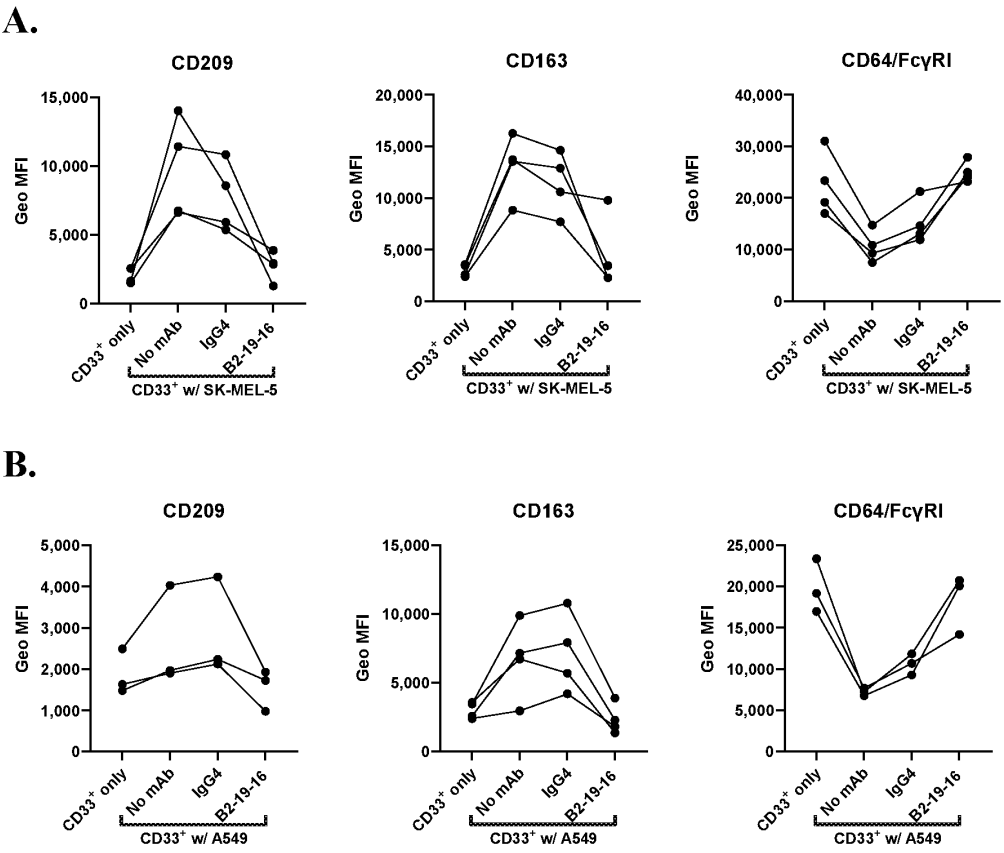


Figure 22

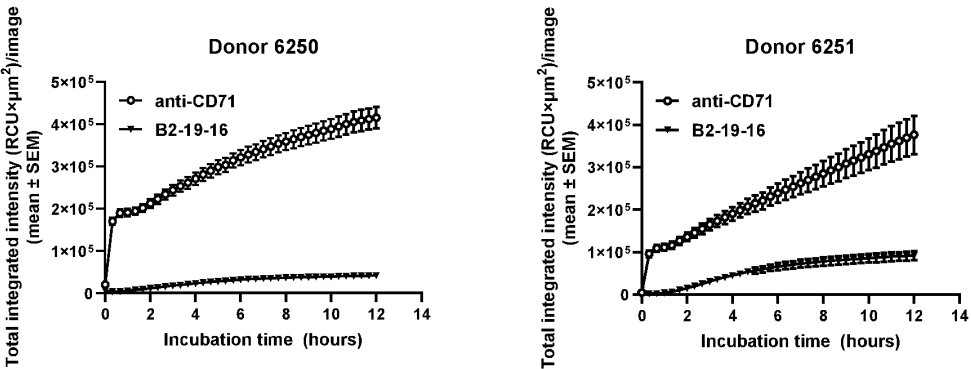


Figure 23

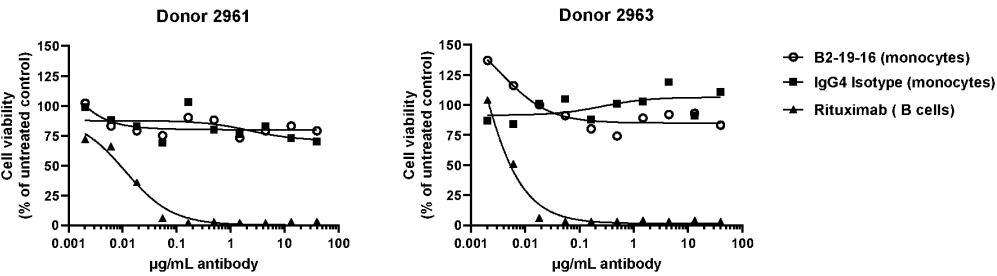


Figure 24