

gp120 Epitope 1



| | | | | | |
|--------------------|--------------------|--------------------|-------------------|----------------------|-------------------|
| CONSENSUS-B | rvkgrl.k.ny | CONSENSUS-C | --m--qr-? | CONSENSUS-O | kamekkkk |
| Epitope 1 | RVKRKYQHL | C.BI.BU910611 | --M--QR-C | O.CM.ANT70C | KAMEK-NKK |
| CONSENSUS-A | --m--qr--c | C.BI.BU910717 | KAM--QR-C | O.CM.CM4974 | K-MEKKKKK |
| A.KE.K89 | --M-TQR-C | C.BI.BU910812 | K-M--Q--C | O.CM.MVP5180 | K-MKKKNPK |
| A.KE.Q23CXCCG | --M--OR-C | C.BR.92BR025 | --E--QR-W | O.GA.VI686 | --MEKKKKK |
| A.RW.KI693 | --M--OM-C | C.BR.BR911513 | --E--QR-W | O.GQ.341HA | KAMERKKKK |
| A.RW.SF1703 | --M--OM-C | C.BW.BW96BW0502 | --M--L--- | O.GQ.655HA | -AVERKKKK |
| A.SE.SOSE7253 | --M--OM-C | C.DJ.DJ259A | K-M-TQR-W | O.GQ.HIVU82990 | KAMERKKKK |
| A.SE.TZSE8538 | --M--OM-C | C.DJ.DJ373A | --M--QM-C | O.GQ.HIVU82991 | NMAEKKKKK |
| A.SE.UGSE6594 | --M--TQM-W | C.ET.ETH2220 | K-M--QR-C | | |
| A.SE.UGSE8891 | --M--OR-S | C.IN.11246 | --R--TLR-- | | |
| A.UA.AF082486 | --M--TQM-W | C.IN.21068 | --R--TLR-- | | |
| A.UG.92UG037 | --M--TQM-W | C.IN.301904 | --R--TLR-- | | |
| A.UG.U455 | --M--OR-- | C.SN.SE364A | --T--MLR-C | | |
| A.ZR.MA246 | --M--ER-- | C.SO.SM145A | --R--LR-W | | |
| A.ZR.MC108 | --AM--OR-C | C.UG.UG268A2 | --M--QR-C | | |
| | --AM--TQM-C | | | | |
| AG.DJ.DJ263 | --M--MOR-- | CONSENSUS-D | --r---?r-- | CONSENSUS-AE | ---eTqm-W |
| AG.DJ.DJ264 | --M--OR-- | D.SN.SE365A2 | -AREMKR-- | AE.CF.90CR402 | ---T-R-W |
| AG.NG.IENG | --M--Q--- | D.TZ.87TZ4632 | --REM-R-- | AE.TH.KH03 | ---ETQM-W |
| | | D.UG.92UG024D | --REMQR-- | AE.TH.KH08 | ---ETQM-W |
| | | D.UG.94UG1141 | --RETQR-- | AE.TH.TH920149 | KA-ETQR-W |
| | | D.UG.C971412 | K-----QR-- | AE.TH.93TH253 | ---ETQI-W |
| | | D.UG.UG266A2 | -----PR-- | AE.TH.A01021 | ---ETQM-W |
| | | D.UG.WH015474 | --R--OR-- | AE.TH.CM240 | ---ETQM-W |
| | | D.ZR.84ZR085 | ---KR-- | AE.TH.E11429.A31 | ---ETQM-W |
| | | D.ZR.84ZR085 | --AR--ER-C | AE.TH.E11429.A31 | -A-ETQM-W |
| | | D.ZR.E1I | --M---M-- | | |
| | | D.ZR.JYI | -AREKER-C | | |
| | | D.ZR.Z226 | --R--ER-C | | |
| CONSENSUS-B | T--T----- | | | | |
| B.AV.MBC18 | -----C | CONSENSUS-F | --R--MQR-W | CONSENSUS-CPZ | ?????????? |
| B.BE.SIM184 | --T----- | F.BR.93BR0201 | --R--MQR-W | CPZGAB | K-MEKK-RD |
| B.CN.R142 | K-E----- | F.BR.B2126A | --R--MQR-W | CPZANVT | -KPIHIIWG |
| B.DE.D31 | K-ET----- | F.BR.B2163A | --R--MQR-W | | |
| B.DE.HAN | ---E...K- | F.FI.FIN6393 | --R--MQR-W | | |
| B.FR.HXB2 | ---E...K- | | | | |
| B.FR.LAI | ---ETK-S- | | | | |
| B.FR.PIH384 | TAR-T----- | CONSENSUS-G | ----qr-w | | |
| B.GA.OYT | --A-----C | G.BE.DRCBL | ----QR-W | | |
| B.GB.CAM1 | ---E----- | G.FI.HH8793 | ----ER-W | | |
| B.JP.ETR | K-ET----- | G.GA.LBV217 | -A--LR-W | | |
| B.NL.ACH320A | --TE----- | G.SE.SE6165 | --T--QR-W | | |
| B.SP.89SP061 | K-T----- | | | | |
| B.TH.TH936705 | --R--R-C | CONSENSUS-H | --Metqr-- | | |
| B.TT.QZ4589 | -----S- | H.BE.VI991 | --METQR-- | | |
| B.US.JRCGSF | -----R- | H.BE.VI997 | --MR....-- | | |
| B.US.JRFL | ---MEM---C | H.CF.90CF056 | --METQR-- | | |
| B.US.MN | K--T-R-- | | | | |
| B.US.RF | --A----- | CONSENSUS-J | --METQ?PW | | |
| B.US.SF2 | | J.SE.SE91733 | --METQ?PW | | |
| B.US.WEAU160 | | J.SE.SE92809 | --METQ--W | | |
| B.ZR.MB314 | | N.CM.YBF30 | K-M-MQSGW | | |

gp120 Epitope 2

| | | | | | |
|--------------------|-------------------|--------------------|-----------------|----------------------|---------------------|
| CONSENSUS-B | ae?1WTVVYY | CONSENSUS-C | ?gn----- | CONSENSUS-O | ..?--YA----a |
| Epitope 2 | (B44) | C.BI.BU910611 | MGN----- | O.CM.ANT70C | ...-YA---A |
| CONSENSUS-A | | C.BI.BU910717 | MGNM--A-- | O.CM.MVP5180 | ...Q-YA---S |
| A.KE.K89 | | C.BI.BU910812 | MGN----- | O.GA.VI686 | ...-YA---A |
| A.KE.Q23CXCCG | | C.BR.92BR025 | RGN----- | O.GQ.341HA | ...-YA---A |
| A.RW.KI693 | | C.BR.BR911513 | MGN----- | O.GQ.655HA | ...-YA---A |
| A.RW.SF1703 | | C.BW.BW96BW0502 | VGN----- | O.GQ.HIVU82990 | ...-YA---A |
| A.SE.SOSE7253 | | C.DJ.DJ259A | -GN----- | O.GQ.HIVU82991 | ..KQ-YA---A |
| A.SE.TZSE8538 | | C.DJ.DJ373A | MGN----- | | |
| A.SE.UGSE6594 | | C.ET.ETH2220 | MGN----- | CONSENSUS-AE | sdn----- |
| A.SE.UGSE8891 | | C.IN.11246 | GKD----- | AE.CF.90CR402 | SDN----- |
| A.UA.AF082486 | | C.IN.21068 | VGN----- | AE.TH.KH03 | SDN----- |
| A.UG.92UG037 | | C.IN.301904 | VGN----- | AE.TH.KH08 | SDK----- |
| A.UG.U455 | | C.SN.SR364A | GGN----- | AE.TH.TH920149 | SDN----- |
| A.ZR.MA246 | | C.SO.SM145A | GGN----- | AE.TH.93TH253 | SNN----- |
| A.ZR.MC108 | | C.UG.UG268A2 | MGN----- | AE.TH.A01021 | -DN----- |
| | | | | AE.TH.CM240 | SDN----- |
| | | | | AE.TH.E11429.A31 | SDN----- |
| | | | | AE.TH.TH921110 | SNN----- |
| AG.DJ.DJ263 | | CONSENSUS-D | | | |
| AG.DJ.DJ264 | | D.SN.SR365A2 | ---K----- | | |
| AG.NG.IBNG | | D.TZ.87TZ4622 | T-Q----- | | |
| | | D.UG.92UG024D | E-QS----- | | |
| | | D.UG.94UG1141 | TGRS----- | | |
| | | D.UG.C971412 | -Q----- | | |
| | | D.UG.UG266A2 | -DN----- | | |
| | | D.UG.WH015474 | -KK----- | | |
| | | D.ZR.84ZR085 | -DN----- | | |
| | | D.ZR.E1I | -DN----- | | |
| | | D.ZR.TY1 | -D----- | | |
| | | D.ZR.NDK | -D----- | | |
| | | D.ZR.Z226 | -DN----- | | |
| CONSENSUS-B | | CONSENSUS-E | ??n----- | CONSENSUS-CPZ | ??E??----?- |
| B.AU.MBC18 | | F.BR.93BR0201 | -N----- | CPZGAB | TSE----- |
| B.BE.SIM184 | | F.BR.B2126A | E.N----- | CPZANT | TNEDY----F- |
| B.CN.R142 | | F.BR.B2163A | E.N----- | | |
| B.DE.D31 | | F.FI.FIN6393 | -DD---I-- | | |
| B.DE.HAN | | | | | |
| B.FR.HXB2 | | | | | |
| B.FR.LAI | | | | | |
| B.FR.PIH384 | | | | | |
| B.GA.OYT | | CONSENSUS-G | smn----- | | |
| B.GB.CAM1 | | G.BE.DRCBL | E.K----- | | |
| B.JP.ETR | | G.FI.HH8793 | SNN----- | | |
| B.NL.ACH320A | | G.GA.LBV217 | SGN----- | | |
| B.SP.89SP061 | | G.SE.SE6165 | SNN----- | | |
| B.TH.TH936705 | | | | | |
| B.TT.QZ4589 | | CONSENSUS-H | -gn----- | | |
| B.TT.QZ4589 | | H.BE.VI991 | VGN----- | | |
| B.US.JRC5F | | H.BE.VI997 | -GN----- | | |
| B.US.JRFL | | H.CF.90CF056 | -QN----- | | |
| B.US.MN | | | | | |
| B.US.RF | | CONSENSUS-I | ?----- | | |
| B.US.SF2 | | J.SE.SE91733 | R-N----- | | |
| B.US.WEAV160 | | J.SE.SR92809 | K-D----- | | |
| B.ZR.MB314 | | N.CM.YBF30 | S-QH----- | | |

gp120 Epitope 3



| | | | | | |
|----------------------|-------------------|--|--|--|--|
| CONSENSUS-B | 21WVTVYYGV | | | | |
| Epitope 3 | KLWVTVYYGV | | | | |
| CONSENSUS-A | n----- | | | | |
| A.KE.K89 | N----- | | | | |
| A.KE.Q23CXCCG | N----- | | | | |
| A.RW.KTIG93 | N----- | | | | |
| A.RW.SF1703 | K----- | | | | |
| A.SE.SOSE7253 | N----- | | | | |
| A.SE.TZSE8538 | K----- | | | | |
| A.SE.UGSE6594 | K----- | | | | |
| A.SE.UGSE8891 | N----- | | | | |
| A.UA.AF082486 | N----- | | | | |
| A.UG.92UG037 | N----- | | | | |
| A.UG.U455 | Q----- | | | | |
| A.ZR.MA246 | N----- | | | | |
| A.ZR.MC108 | N----- | | | | |
| AG.DJ.DJ263 | K----- | | | | |
| AG.DJ.DJ264 | K----- | | | | |
| AG.NG.IBNG | Q----- | | | | |
| AGI.GR.97PVCB | DM----- | | | | |
| AGI.CY.94CY032 | N----- | | | | |
| AGI.GR.97PVMY | N----- | | | | |
| CONSENSUS-B | ----- | | | | |
| B.AV.MBCI8 | NF----- | | | | |
| B.BE.SIM184 | Q----- | | | | |
| B.CN.RI42 | N----- | | | | |
| B.DE.D31 | K----- | | | | |
| B.DE.HAN | N----- | | | | |
| B.FR.HXB2 | K----- | | | | |
| B.FR.LAI | K----- | | | | |
| B.FR.PIH384 | Q----- | | | | |
| B.GA.OYT | N----- | | | | |
| B.GB.CAM1 | K----- | | | | |
| B.JP.ETR | Q----- | | | | |
| B.NL.ACH320A | Q----- | | | | |
| B.SP.89SP061 | N----- | | | | |
| B.TH.TH936705 | N----- | | | | |
| B.TT.QZ4589 | Q----- | | | | |
| B.US.JRC5F | K----- | | | | |
| B.US.JRFL | K----- | | | | |
| B.US.MN | K----- | | | | |
| B.US.RF | D----- | | | | |
| B.US.SF2 | K----- | | | | |
| B.US.WEAU160 | N----- | | | | |
| B.ZR.MB314 | N----- | | | | |
| CONSENSUS-C | | | | | |
| C.BI.BU910611 | n----- | | | | |
| C.BI.BU910717 | NM--A----- | | | | |
| C.BI.BU910812 | N----- | | | | |
| C.BR.92BR025 | N----- | | | | |
| C.BR.BR911513 | N----- | | | | |
| C.BW.BW96BW0502 | N----- | | | | |
| C.DJ.DJ259A | N----- | | | | |
| C.DJ.DJ373A | N----- | | | | |
| C.ET.ETH2220 | N----- | | | | |
| C.IN.11246 | D----- | | | | |
| C.IN.21068 | N----- | | | | |
| C.IN.301904 | N----- | | | | |
| C.SN.SR364A | N----- | | | | |
| C.SO.SM145A | N----- | | | | |
| C.UG.UG268A2 | N----- | | | | |
| CONSENSUS-D | | | | | |
| D.SN.SR365A2 | K----- | | | | |
| D.TZ.87TZ4622 | Q----- | | | | |
| D.UG.92UG024D | QS----- | | | | |
| D.UG.94UG1141 | KS----- | | | | |
| D.UG.C971412 | Q----- | | | | |
| D.UG.UG266A2 | N----- | | | | |
| D.UG.WHO15474 | KK----- | | | | |
| D.ZR.84ZR085 | N----- | | | | |
| D.ZR.ELI | N----- | | | | |
| D.ZR.JY1 | D----- | | | | |
| D.ZR.NDK | D----- | | | | |
| D.ZR.Z226 | N----- | | | | |
| CONSENSUS-F | | | | | |
| F.BR.93BR0201 | n----- | | | | |
| F.BR.B2126A | N----- | | | | |
| F.BR.B2163A | N----- | | | | |
| F.FI.FIN6393 | D---I--- | | | | |
| CONSENSUS-G | | | | | |
| G.BE.DRCBL | n----- | | | | |
| G.FI.HH8793 | K----- | | | | |
| G.GA.LBV217 | N----- | | | | |
| G.SE.SE6165 | N----- | | | | |
| CONSENSUS-H | | | | | |
| H.BE.VI991 | N----- | | | | |
| H.BE.VI997 | N----- | | | | |
| H.CF.90CF056 | N----- | | | | |
| CONSENSUS-J | | | | | |
| J.SE.SE91733 | N----- | | | | |
| J.SE.SR92809 | D----- | | | | |
| N.CM.YBF30 | QH----- | | | | |
| CONSENSUS-O | | | | | |
| O.CM.ANT70C | --YA---a-- | | | | |
| O.CM.MVP5180 | .-YA--A-- | | | | |
| O.GA.VI686 | Q-YA--S-- | | | | |
| O.GQ.341HA | .-YA--A-- | | | | |
| O.GQ.655HA | .-YA--A-- | | | | |
| O.GQ.HIVU82990 | .-YA--A-- | | | | |
| O.GQ.HIVU82991 | Q-YA--A-- | | | | |
| CONSENSUS-AE | | | | | |
| AE.CF.90CF402 | n----- | | | | |
| AE.TH.KH03 | N----- | | | | |
| AE.TH.KH08 | N----- | | | | |
| AE.TH.TH920149 | K----- | | | | |
| AE.TH.93TH253 | N----- | | | | |
| AE.TH.A01021 | N----- | | | | |
| AE.TH.CM240 | N----- | | | | |
| AE.TH.E11429.A31 | N----- | | | | |
| AE.TH.TH921110 | N----- | | | | |
| CONSENSUS-CPZ | | | | | |
| CPZGAB | .??---?--- | | | | |
| CPZANT | .DY---F--- | | | | |

gp120 Epitope 7-8



| | | | | | | |
|--------------------|----------------------|------------|--------------------|--------------------|----------------------|-----------------------|
| CONSENSUS-B | VPVWKEAaTTTL | HLA | CONSENSUS-C | -----k----- | CONSENSUS-O | -----ed---PV- |
| Epitope # | VPVWKEAaTTT (B55) | | C.BI.BU910611 | g-----p--- | O.CM.ANT70C | -----ED--PV- |
| 7 | VPVWKEAaTTT (B35) | | C.BI.BU910717 | -----k--- | O.CM.CM4974 | -----D--PV- |
| 8 | VPVWKEAaTTTL | | C.BI.BU910812 | -----k--- | O.CM.MVP5180 | -----E--APV- |
| CONSENSUS-A | -----d-e----- | | C.BR.92BR025 | -----k--- | O.GA.VI686 | -----ED-NPV- |
| A.KE.K89 | -----N-E--- | | C.BR.BR911513 | -----k--- | O.GQ.341HA | -----ED-NPV- |
| A.KE.Q23CXCCG | -----RD-D--- | | C.BW.BW96BW0502 | -----k--- | O.GQ.655HA | -----ED-IPV- |
| A.RW.KIG93 | -----D-E--- | | C.DJ.DJ259A | -----D-NP- | O.GQ.HIVU82990 | -----ED--PV- |
| A.RW.SF1703 | -----D-E--- | | C.DJ.DJ373A | -----Q--NP--- | O.GQ.HIVU82991 | -----ED--PV- |
| A.SE.SOSE7253 | -----D-E--- | | C.ET.ETH2220 | -----D-SP--- | | |
| A.SE.TZSE8538 | -----D-E--- | | C.IN.11246 | -----k--- | CONSENSUS-AE | -----rD-d----- |
| A.SE.UGSE6594 | -----D-E--- | | C.IN.21068 | -----N--- | AE.CF.90CR402 | -----RD-D-I- |
| A.SE.UGSE8891 | -----D-E--- | | C.IN.301904 | -----k--- | AE.TH.KH03 | -----RD-E--- |
| A.UA.AF082486 | I--RD-E--- | | C.SN.SR364A | -----k--- | AE.TH.KH08 | -----RD-D--- |
| A.UG.92UG037 | --RD-E--- | | C.SO.SM145A | -----R--k--- | AE.TH.TH920149 | -----D-D--- |
| A.UG.U455 | --I--D-N--- | | C.UG.UG268A2 | -----k--- | AE.TH.93TH253 | -----RD-D--- |
| A.ZR.MA246 | -----D-V--- | | CONSENSUS-D | -----k--- | AE.TH.A01021 | -----RD-D--- |
| A.ZR.MC108 | -----D-E--- | | D.SN.SR365A2 | -----k--- | AE.TH.CM240 | -----RD-D--- |
| AG.DJ.DJ263 | -----RN-E--- | | D.TZ.87TZ4632 | -----k--- | AE.TH.E11429.A31 | -----D-D--- |
| AG.DJ.DJ264 | -----RD-E--- | | D.UG.92UG024D | -----k--- | AE.TH.TH921110 | -----RD-D--- |
| AG.NG.IBNG | -----T-E--- | | D.UG.94UG1141 | -----k--- | CONSENSUS-CPZ | -----??-??? |
| AGI.GR.97PVCH | -----RD-E-KP | | D.UG.C971412 | -----k--- | CPZGAB | -----HD-DPV- |
| AGI.CY.94CY032 | -----RD-E--- | | D.UG.UG266A2 | -----D-E--- | CPZANT | -----RN--P--- |
| AGI.GR.97PVMY | -----RD-E-SP | | D.UG.WHO15474 | -----k--- | | |
| CONSENSUS-B | -----R----- | | D.ZR.84ZR085 | -----k--- | | |
| B.AU.MBC18 | -----R----- | | D.ZR.E1I | -----k--- | | |
| B.BE.S1M184 | -----E----- | | D.ZR.JY1 | -----I----- | | |
| B.CN.R142 | -----E----- | | D.ZR.NDK | -----I----- | | |
| B.DE.D31 | -----E----- | | D.ZR.Z226 | -----I----- | | |
| B.DE.D31 | -----E----- | | CONSENSUS-F | -----k--- | | |
| B.DE.HAN | -----E----- | | F.BR.93BR0201 | -----k--- | | |
| B.FR.HXB2 | -----E----- | | F.BR.B2126A | -----k--- | | |
| B.FR.LAI | -----E----- | | F.BR.B2163A | -----D----- | | |
| B.FR.PIH384 | -----E----- | | F.FI.F1N6393 | -----N----- | | |
| B.GA.OYI | -----E----- | | CONSENSUS-G | -----k--- | | |
| B.GB.CAM1 | -----E----- | | G.BE.DRCBL | -----ED-NAP- | | |
| B.JP.ETR | -----E----- | | G.FI.HH8793 | -----ED-K--- | | |
| B.NL.ACH320A | -----E----- | | G.GA.LBV217 | -----A-ED-D--- | | |
| B.SP.89SP061 | -----E----- | | G.SE.SE6165 | -----ED-D--- | | |
| B.TH.TH936705 | -----N----- | | CONSENSUS-H | -----k--- | | |
| B.TT.QZ4589 | -----T----- | | H.BE.VI991 | -----k--- | | |
| B.US.JRCSP | -----T----- | | H.BE.VI997 | -----k--- | | |
| B.US.JRFL | -----T----- | | H.CF.90CF056 | -----k--- | | |
| B.US.MN | -----T----- | | CONSENSUS-I | -----k--- | | |
| B.US.RF | -----T----- | | H.BE.VI991 | -----k--- | | |
| B.US.SF2 | -----T----- | | H.BE.VI997 | -----k--- | | |
| B.US.WEAU160 | -----T----- | | H.CF.90CF056 | -----k--- | | |
| B.ZR.MB314 | -----T----- | | CONSENSUS-J | -----?D-K----- | | |
| | -----T----- | | J.SE.SE91733 | -----RD-K----- | | |
| | -----T----- | | J.SE.SE92809 | -----D-K----- | | |
| | -----T----- | | N.CM.YBF30 | -----R--E----- | | |

gp120 Epitope 12

| | | | | | |
|--------------------|----------------------|--------------------|--------------------|----------|----------|
| CONSENSUS-B | HEDIISLMDQSLK | CONSENSUS-C | CONSENSUS-O | Q | e |
| Epitope 12 | HEDIISLMDQSLK (A2) | C.BI.BU910611 | O.CM.ANT70C | Q | |
| CONSENSUS-A | t | C.BI.BU910717 | O.CM.CM4974 | Q | |
| A.KE.K89 | ----- | C.BI.BU910812 | O.CM.MVP5180 | Q | |
| A.KE.Q23CXCCG | ----- | C.BR.92BR025 | O.GA.VI686 | Q | |
| A.RW.KI693 | ----- | C.BR.BR911513 | O.GQ.341HA | QR | |
| A.RW.SF1703 | ----- | C.BW.BW96BW0502 | O.GQ.655HA | QR | |
| A.SE.SOSE7253 | ----- | C.DJ.DJ259A | O.GQ.HIVU82990 | QR | |
| A.SE.TZSE8538 | ----- | C.DJ.DJ373A | O.GQ.HIVU82991 | QR | |
| A.SE.UGSE6594 | ----- | C.ET.ETH2220 | | | |
| A.SE.UGSE8891 | ----- | C.IN.11246 | | | |
| A.UA.AF082486 | ----- | C.IN.21068 | | | |
| A.UG.92UG037 | ----- | C.IN.301904 | | | |
| A.UG.U455 | ----- | C.SN.SR364A | | | |
| A.ZR.MA246 | ----- | C.SO.SM145A | | | |
| A.ZR.MC108 | ----- | C.UG.UG268A2 | | | |
| | ----- | | | | |
| AG.DJ.DJ263 | ----- | CONSENSUS-D | D.SN.SR365A2 | Q | |
| AG.DJ.DJ264 | ----- | D.TZ.87TZ4632 | D.TZ.87TZ4632 | Q | |
| AG.NG.IBNG | ----- | D.UG.92UG024D | D.UG.92UG024D | Q | |
| | ----- | D.UG.94UG1141 | D.UG.94UG1141 | Q | |
| | ----- | D.UG.C971412 | D.UG.C971412 | Q | |
| | ----- | D.UG.UG266A2 | D.UG.UG266A2 | Q | |
| AGI.GR.97PVCB | ----- | D.UG.WH015474 | D.UG.WH015474 | Q | |
| AGI.CY.94CY032 | ----- | D.ZR.84ZR085 | D.ZR.84ZR085 | Q | |
| AGI.GR.97PVMY | ----- | D.ZR.EI1 | D.ZR.EI1 | Q | |
| | ----- | D.ZR.TY1 | D.ZR.TY1 | Q | |
| | ----- | D.ZR.NDK | D.ZR.NDK | Q | |
| | ----- | D.ZR.Z226 | D.ZR.Z226 | Q | |
| CONSENSUS-B | ----- | | | | |
| B.AV.MBC18 | ----- | CONSENSUS-F | F.BR.93BR0201 | Q | |
| B.BE.SIM184 | ----- | F.BR.B2126A | F.BR.B2126A | Q | |
| B.CN.R142 | ----- | F.BR.B2163A | F.BR.B2163A | Q | |
| B.DE.D31 | ----- | F.FI.FIN6393 | F.FI.FIN6393 | Q | |
| B.DE.HAN | ----- | | | | |
| B.FR.HXB2 | ----- | CONSENSUS-G | G.BE.DRCBL | Q | |
| B.FR.LAI | ----- | G.FI.HH8793 | G.FI.HH8793 | Q | |
| B.FR.PIH384 | ----- | G.GA.LBV217 | G.GA.LBV217 | Q | |
| B.GA.OYT | ----- | G.SE.SE6165 | G.SE.SE6165 | Q | |
| B.GB.CAM1 | ----- | | | | |
| B.JP.ETR | ----- | CONSENSUS-H | H.BE.VI991 | Q | |
| B.NL.ACH320A | ----- | H.BE.VI997 | H.BE.VI997 | Q | |
| B.SP.89SP061 | ----- | H.CF.90CF056 | H.CF.90CF056 | Q | |
| B.TH.TH936705 | ----- | | | | |
| B.TT.QZ4589 | ----- | CONSENSUS-I | I.BE.VI991 | Q | |
| B.US.JRC5F | ----- | I.BE.VI997 | I.BE.VI997 | Q | |
| B.US.JRFL | ----- | | | | |
| B.US.MN | ----- | CONSENSUS-J | J.SE.SE91733 | Q | |
| B.US.RF | ----- | J.SE.SE92809 | J.SE.SE92809 | Q | |
| B.US.SF2 | ----- | | | | |
| B.US.WEAU160 | ----- | N.CM.YBF30 | N.CM.YBF30 | Q | |
| B.ZR.MB314 | ----- | | | | |

CTL

gp120 Epitope 15-17



| | | | | | | |
|---------------------------------|-----------------------------|------------|--------------------|-----------------------------|----------------------|----------------------------|
| CONSENSUS-B Epitope # | ntsyrl1?catesvITQACP | HLA | CONSENSUS-C | sp?-----n-----a----- | CONSENSUS-O | t-m-t-n-n-sTc-?-? |
| 15 | TTSYTLTSCNNTSVITQACP | (A2) | C.BI.BU910611 | YSD-----N-----A----- | O.CM.ANT70C | SKM-T-TN--SIT- |
| 16 | KLTSCNNTSV | (A2) | C.BI.BU910717 | SSY-----N-----T----- | O.CM.MVP5180 | G-T-T-M-TN--SIT-K |
| 17 | TLTSCNNTSV | (A2.1) | C.BI.BU910812 | SNT-----N-----A----- | O.GA.VI686 | S-M-T-N--SIT-K |
| CONSENSUS-A | ??? | | C.BR.92BR025 | SGD-----N-----A----- | O.GQ.341HA | T-M-T-N--SIT- |
| A.KE.K89 | -----N-----a----- | | C.BR.BR911513 | SGD-----N-----A----- | O.GQ.655HA | T-M-T-N--SIT- |
| A.KE.Q23CXCCG | -----N-----A----- | | C.BW.BW96BW0502 | SNE-----N-----A----- | O.GQ.HIVU82990 | S-M-T-N--SIT-K |
| A.RW.KIG93 | -----N-----A----- | | C.DJ.DJ259A | SE-----N-----A----- | O.GQ.HIVU82991 | T-M-T-N--SIT- |
| A.RW.SF1703 | -----N-----A----- | | C.DJ.DJ373A | EE-----N-----S----- | | |
| A.SE.SOSE7253 | -----N-----A----- | | C.ET.ETH2220 | S-D-----N-----T----- | CONSENSUS-AE | se-----n-----k----- |
| A.SE.TZSE8538 | -----N-----A----- | | C.IN.11246 | SNQ-----S----- | AE.CF.90CR402 | SHKF--H-----K----- |
| A.SE.UGSE6594 | -----N-----A----- | | C.IN.21068 | SGY-----N-----AL----- | AE.TH.KH03 | SSE--T-----K----- |
| A.UA.AF082486 | -----N-----A----- | | C.IN.301904 | SEY-----N-----A----- | AE.TH.KH08 | SSE-M-N--S--K----- |
| A.UG.92UG037 | -----N-----A----- | | C.SN.SR364A | SSE-----N-----A----- | AE.TH.TH920149 | SSE--N-----R----- |
| A.UG.U455 | -----N-----A----- | | C.SO.SM145A | SRK-----N-----A----- | AE.TH.93TH253 | SSE--N-----K----- |
| A.ZR.MA246 | -----N-----A----- | | C.UG.UG268A2 | SNT-----N-----A----- | AE.TH.A01021 | SSE--N-----H-K----- |
| A.ZR.MC108 | -----N-----A----- | | | | AE.TH.CM240 | SSE--N-----K----- |
| AG.DJ.DJ263 | -SQ-----N-H-A-K--R | | CONSENSUS-D | Y-----N-----a----- | AE.TH.E11429.A31 | -SE--N-----T-K----- |
| AG.DJ.DJ264 | -SQ-----N-----A-K----- | | D.SN.SR365A2 | Y-----N-----K----- | AE.TH.TH921110 | YSE--N-----K----- |
| AG.NG.IBNG | GSQ-----N-----A----- | | D.TZ.87TZ4632 | SS-----N-----A----- | CONSENSUS-CPZ | ?N?-?-?-?-?-?-?-?-? |
| AGI.GR.97PVC | YRE--MS--NHK---- | | D.UG.92UG024D | -----N-----A--E-- | CPZGAB | -NT--I--N--TA----- |
| AGI.CY.94CY032 | TEE-M-N-A-T-K---- | | D.UG.94UG1141 | -----N-----A----- | CPZANT | TNC-Y-WH--TT--S-E- |
| AGI.GR.97PVMY | TSD-M-N-Y-S----- | | D.UG.C971412 | -----N-----A----- | | |
| B.AU.MBC18 | -----S----- | | D.UG.UG266A2 | -----N-----A--T-- | | |
| B.BE.SIM184 | -----T--N----- | | D.UG.WHO15474 | YS-----N-----A----- | | |
| B.CN.RL42 | S-----N----- | | D.ZR.84ZRO85 | YGT-----N-----A----- | | |
| B.DE.D31 | -----S----- | | D.ZR.ELI | S-N-----N-----A----- | | |
| B.DE.HAN | T--M-H-R----- | | D.ZR.JY1 | Y-N-----N-----A----- | | |
| B.FR.HXB2 | T--K-TS----- | | D.ZR.NDK | S-N-----N-D--T----- | | |
| B.FR.LAI | T--T-TS----- | | D.ZR.Z226 | S-N-----N-----A----- | | |
| B.FR.PIH384 | E--M-N----- | | CONSENSUS-F | Y-----N-----a----- | | |
| B.GA.OY1 | D-KF--H--T----- | | F.BR.93BR0201 | SS-----N-----K----- | | |
| B.GB.CAM1 | T--H----- | | F.BR.B2126A | -----N-----A--E-- | | |
| B.JP.ETR | -C--S-D----- | | F.BR.B2163A | -----N-----A----- | | |
| B.NL.ACH320A | Y-----S----- | | F.FI.FIN6393 | REE-----T--T----- | | |
| B.SP.89SP061 | -----RS----- | | G.BE.DRCBL | S-W-----TN--V-T-K-- | | |
| B.TH.TH936705 | -----LN----- | | G.FI.HH8793 | YSN-----N-V-T-K-- | | |
| B.TT.QZ4589 | VRN-----N----- | | G.GA.LBV217 | T-D-----N--A-T-K-- | | |
| B.US.JRC5F | -K--S----- | | G.SE.SE6165 | A-N--TH--V-T-K-- | | |
| B.US.JRFL | -----S-D----- | | CONSENSUS-H | S-----N----- | | |
| B.US.MN | S-----S----- | | H.BE.VI991 | DNH-----N-----K----- | | |
| B.US.RF | YGN-T--H--S----- | | H.BE.VI997 | S-K-----N----- | | |
| B.US.SF2 | Y-N--H--R----- | | H.CF.90CF056 | S-Q-----N----- | | |
| B.US.WEAU160 | ---T--N-KS-T----- | | CONSENSUS-J | -K?-I--N-----K----- | | |
| B.ZR.MB314 | -----N----- | | J.SE.SE91733 | -K--I--N-----K----- | | |
| | | | J.SE.SE92809 | -KN-I--N-----K----- | | |
| | | | N.CM.YBF30 | -KT-----N--TAV----- | | |

gp120 Epitope 18

| | | | | | |
|--------------------|------------------|--------------------|----------------|----------------------|------------------|
| CONSENSUS-B | CKNVSTVQC | CONSENSUS-C | -n----- | CONSENSUS-O | ---ITV-T- |
| Epitope 18 | CTNVSTVQC (Cw8) | C.BI.BU910611 | -T----- | O.CM.ANT70C | -R-ITV-T- |
| CONSENSUS-A | ----- | C.BI.BU910717 | -N----- | O.CM.MVP5180 | -H-I-V-T- |
| A.KE.K89 | -T----- | C.BI.BU910812 | -N----- | O.GA.VI686 | ---ITV-T- |
| A.KE.Q23CXCCG | -----S--- | C.BR.92BR025 | -N---I- | O.GQ.341HA | ---ITV-T- |
| A.RW.KIG93 | -----S--- | C.BR.BR911513 | -N----- | O.GQ.655HA | ---ITV-T- |
| A.RW.SF1703 | -----S--- | C.BW.BW96BW0502 | -N--S- | O.GQ.HIVU82990 | -N-ITV-T- |
| A.SE.SOSE7253 | -N----- | C.DJ.DJ259A | -N----- | O.GQ.HIVU82991 | ---ITV-T- |
| A.SE.TZSE8538 | ----- | C.DJ.DJ373A | -H----- | CONSENSUS-AE | -----S--- |
| A.SE.UGSE6594 | ----- | C.ET.ETH2220 | -R----- | AE.CF.90CR402 | -----S--- |
| A.SE.UGSE8891 | -----S- | C.IN.11246 | -H----- | AE.TH.KH03 | -----S--- |
| A.UA.AF082486 | ----- | C.IN.21068 | -H----- | AE.TH.KH08 | -----S--- |
| A.UG.92UG037 | ----- | C.IN.301904 | -H----- | AE.TH.TH920149 | -----S--- |
| A.UG.U455 | ----- | C.SN.SR364A | -N----- | AE.TH.93TH253 | -----S--- |
| A.ZR.MA246 | -R----- | C.SO.SM145A | -RY----- | AE.TH.A01021 | -----S--- |
| A.ZR.MC108 | -T----- | C.UG.UG268A2 | -N----- | AE.TH.CM240 | -----S--- |
| CONSENSUS-B | ----- | CONSENSUS-D | ----- | AE.TH.E11429.A31 | -----S--- |
| B.AU.MBC18 | ----- | D.SN.SR365A2 | ----- | AE.TH.E11429.A31 | -----S--- |
| B.BE.SIM184 | -T----- | D.TZ.87TZ4622 | ----- | AE.TH.TH921110 | -----S--- |
| B.CN.R142 | ----- | D.UG.92UG024D | -N----- | CONSENSUS-CPZ | -?---?-H- |
| B.DE.D31 | ----- | D.UG.94UG141 | ----- | CPZGAB | -T-----H- |
| B.DE.HAN | ----- | D.UG.C971412 | ----- | CPZANT | -----V-H- |
| B.FR.HXB2 | -T----- | D.UG.UG266A2 | ----- | | |
| B.FR.LAI | -T----- | D.UG.WHO15474 | ----- | | |
| B.FR.PIH384 | -T----- | D.ZR.84ZR085 | -----S- | | |
| B.GA.OYT | -T----- | D.ZR.E1I | -T----- | | |
| B.GB.CAM1 | -T----- | D.ZR.JY1 | -K----- | | |
| B.JP.ETR | ----- | D.ZR.NDK | -S----- | | |
| B.NL.ACH320A | ----- | D.ZR.Z226 | -T----- | | |
| B.SP.89SP061 | -T----- | CONSENSUS-F | ----- | | |
| B.TH.TH936705 | -T----- | F.BR.93BR0201 | ----- | | |
| B.TT.QZ4589 | ----- | F.BR.B2126A | ----- | | |
| B.US.JRC5F | ----- | F.FI.B2126A | ----- | | |
| B.US.JRFL | ----- | F.FI.FIN6393 | -R----- | | |
| B.US.MN | ----- | CONSENSUS-G | ----- | | |
| B.US.RF | ----- | G.BE.DRCBL | -N----- | | |
| B.US.SF2 | -T----- | G.FI.HH8793 | -Q----- | | |
| B.US.WEAU160 | ----- | G.GA.LBV217 | ----- | | |
| B.ZR.MB314 | -N----- | G.SE.SE6165 | ----- | | |
| | | CONSENSUS-H | -T----- | | |
| | | H.BE.VI991 | -T----- | | |
| | | H.BE.VI997 | -T----- | | |
| | | H.CF.90CF056 | -T----- | | |
| | | CONSENSUS-J | ----- | | |
| | | J.SE.SE91733 | ----- | | |
| | | J.SE.SE92809 | ----- | | |
| | | N.CM.YBF30 | -T----- | | |

gp120 Epitope 19-21



| CONSENSUS-B Epitope # | RPVVS ^T Q ^L LL ^L NGSLA ^R e ^e v ^v | HLA (B7) (B35) (B*3501) | CONSENSUS-C | K----- [?] - ^I ₁ | CONSENSUS-O | -- ^T - ^T ----- ^I ----- ^T -SKG ^K IR |
|--------------------------|--|----------------------------------|-----------------|---|------------------|---|
| CONSENSUS-B 19 | RPVVS ^T Q ^L LL ^L NGSLA ^R e ^e v ^v | HLA (B7) | C.BI.BU910611 | K----- ^T ----- ^K - ^I ₁ | O.CM.ANT70C | -- ^T - ^T ----- ^I ----- ^T -SKG ^K IR |
| 20 | RPVVS ^T Q ^L LL ^L NGSLA ^R e ^e v ^v | (B35) | C.BI.BU910717 | K----- ^N - ^T ----- ^K - ^I ₁ | O.CM.CM4974 | -- ^T - ^T ----- ^I ----- ^S - ^T ISK ^G - ^I R |
| 21 | RPVVS ^T Q ^L LL ^L NGSLA ^R e ^e v ^v | (B*3501) | C.BI.BU910812 | K----- ^G - ^I ₁ | O.CM.MVP5180 | K- ^T - ^T ----- ^I ----- ^T - ^S R- ^K IR |
| CONSENSUS-A | RPVVS ^T Q ^L LL ^L NGSLA ^R e ^e v ^v | | C.BR.92BR025 | K----- ^I ₁ | O.GA.VI686 | K- ^T - ^T ----- ^I ----- ^T - ^S K- ^K IR |
| A.KE.K89 | K----- [?] - [?] - ^m | | C.BR.BR911513 | K----- ^V - ^K - ^G - ^I ₁ | O.GQ.341HA | -- ^T - ^T ----- ^I ----- ^T - ^S K ^G - ^R |
| A.KE.Q23XCXCCG | K----- ^G - ^m | | C.BW.BW96BW0502 | K----- ^D - ^D - ^I ₁ | O.GQ.655HA | -- ^T - ^T ----- ^I ----- ^T - ^S K ^G - ^R |
| A.RW.KIG93 | K----- ^K - ^N IT | | C.DJ.DJ259A | K----- ^T - ^D - ^I ₁ | O.GQ.HIVU82990 | K- ^T - ^H - ^I ----- ^T - ^S K ^G IR |
| A.RW.SF1703 | K----- ^K - ^D | | C.DJ.DJ373A | K----- ^I - ^G - ^I ₁ | O.GQ.HIVU82991 | -- ^T - ^T ----- ^I ----- ^T - ^S K ^G - ^R |
| A.SE.SOSE7253 | K----- ^K - ^K IM | | C.ET.ETH2220 | K----- ^S - ^G - ^I ₁ | CONSENSUS-AE | K----- ^I ₁ |
| A.SE.TZSE8538 | K----- ^R - ^K - ^M | | C.IN.11246 | K----- ^G - ^G - ^I ₁ | AE.CF.90CR402 | K----- ^I ₁ |
| A.SE.UGSE6594 | K----- ^K - ^G GIR | | C.IN.21068 | K----- ^G - ^G - ^I ₁ | AE.TH.KH03 | K----- ^G - ^I ₁ |
| A.SE.UGSE8891 | K----- ^T - ^M | | C.IN.301904 | K----- ^G - ^I ₁ | AE.TH.KH08 | K----- ^G - ^I ₁ |
| A.UA.AF082486 | K----- ^K - ^M | | C.SN.SE364A | K----- ^G - ^I ₁ | AE.TH.TH920149 | K----- ^K - ^I ₁ |
| A.UG.92UG037 | K----- ^K - ^M | | C.SO.SM145A | K----- ^G - ^I ₁ | AE.TH.93TH253 | K----- ^K - ^I ₁ |
| A.UG.U455 | K----- ^K - ^M | | C.UG.UG268A2 | K----- ^I ₁ | AE.TH.A01021 | K----- ^K - ^I ₁ |
| A.ZR.MA246 | K----- ^G - ^M | | CONSENSUS-D | K----- ^I ₁ | AE.TH.CM240 | K----- ^K - ^I ₁ |
| A.ZR.MC108 | K----- ^S - ^M | | D.SN.SE365A2 | K----- ^I ₁ | AE.TH.E11429.A31 | K----- ^K - ^I ₁ |
| AG.DJ.DJ263 | K----- ^G --- | | D.TZ.87TZ4622 | K----- ^x ----- ^D - ^I ₁ | AE.TH.TH921110 | K----- ^K - ^I ₁ |
| AG.DJ.DJ264 | K----- ^G --- | | D.UG.92UG024D | K----- ^I ₁ | CONSENSUS-CPZ | ? |
| AG.NG.IBNG | K----- ^G --- | | D.UG.94UG1141 | K----- ^K - ^I ₁ | CPZGAB | K----- ^T ----- ^I ----- ^G MIT |
| AGI.GR.97PVCH | K----- ^T - ^G - ^G --- | | D.UG.C971412 | K----- ^K - ^I ₁ | CPZANT | S-M-A-W----- ^T YQT.NTS |
| AGI.CY.94CY032 | K----- ^T - ^G - ^G --- | | D.UG.UG266A2 | K----- ^I ₁ | | |
| AGI.GR.97PVMY | K----- ^S - ^T - ^G --- | | D.UG.WH015474 | K----- ^I ₁ | | |
| CONSENSUS-B | ----- ^S - ^S - ^G --- | | D.ZR.84ZR085 | K----- ^I ₁ | | |
| B.AU.MBCL8 | ----- ^S - ^S - ^G --- | | D.ZR.ELI | K----- ^I ₁ | | |
| B.BE.SIMI84 | ----- ^S - ^S - ^G --- | | D.ZR.JY1 | K----- ^I ₁ | | |
| B.CN.RI42 | ----- ^S - ^S - ^G --- | | D.ZR.NDK | K----- ^I ₁ | | |
| B.DE.D31 | ----- ^S - ^S - ^G --- | | D.ZR.Z226 | K----- ^I ₁ | | |
| B.DE.HAN | ----- ^S - ^S - ^G --- | | CONSENSUS-E | K----- ^I ₁ | | |
| B.FR.HXB2 | ----- ^S - ^S - ^G --- | | F.BR.93BR0201 | K----- ^G - ^I ₁ | | |
| B.FR.LAI | ----- ^S - ^S - ^G --- | | F.BR.B2126A | K----- ^D - ^I ₁ | | |
| B.FR.PIH384 | ----- ^S - ^S - ^G --- | | F.BR.B2163A | K----- ^D - ^I ₁ | | |
| B.GA.OYI | ----- ^S - ^S - ^G --- | | F.FI.FIN6393 | K----- ^S - ^G - ^G - ^I ₁ | | |
| B.GB.CAM1 | ----- ^S - ^S - ^G --- | | G.BE.DRCBL | K----- ^K - ^D - ^I ₁ | | |
| B.JP.ETR | ----- ^S - ^S - ^G --- | | G.FI.HH8793 | K----- ^G - ^I ₁ | | |
| B.NL.ACH320A | ----- ^S - ^S - ^G --- | | G.GA.LBV217 | K----- ^I ₁ | | |
| B.SP.89SP061 | ----- ^S - ^S - ^G --- | | G.SE.SE6165 | K----- ^G - ^K IR | | |
| B.TH.TH936705 | ----- ^S - ^S - ^G --- | | CONSENSUS-H | K----- ^G - ^I ₁ | | |
| B.TT.QZ4589 | ----- ^S - ^S - ^G --- | | H.BE.VI991 | K----- ^V - ^E - ^I ₁ | | |
| B.US.JRCSF | ----- ^S - ^S - ^G --- | | H.BE.VI997 | K----- ^G - ^I ₁ | | |
| B.US.JRFL | ----- ^S - ^S - ^G --- | | H.CF.90CF056 | K----- ^Q - ^I ₁ | | |
| B.US.MN | ----- ^S - ^S - ^G --- | | CONSENSUS-I | K----- ^G - ^I ₁ | | |
| B.US.RF | ----- ^S - ^S - ^G --- | | J.SE.SE91733 | K----- ^V - ^G - ^D - ^I ₁ | | |
| B.US.SF2 | ----- ^S - ^S - ^G --- | | J.SE.SE92809 | K----- ^I - ^G - ^D - ^I ₁ | | |
| B.US.WEAU160 | ----- ^S - ^S - ^G --- | | N.CM.YBF30 | K----- ^I - ^I ----- ^N TDG ^T - ^I | | |
| B.ZR.MB314 | ----- ^S - ^S - ^G --- | | | | | |

gp120 Epitope 22-24

| CONSENSUS-B Epitope # | sveInctrPnnntRksI | HLA | CONSENSUS-C | CONSENSUS-D | CONSENSUS-E | CONSENSUS-O | HLMT-r--aI?dVqem |
|--------------------------|----------------------|-------|-----------------|---------------|-------------|----------------|-------------------|
| 22 | SVEINCTRPNNNTRKSII | (A2) | C.BI.BU910611 | D.SN.SE365A2 | -----E-- | O.CM.ANT70C | TLNMT-r--QIDIQEMR |
| 23 | RPNNTTRKSI | (B7) | C.BI.BU910717 | D.TZ.87TZ4622 | -----G-- | O.CM.CM4974 | TINMT--NGTRDVOO- |
| 24 | RPNNTTRKSI | (B7) | C.BI.BU910812 | D.UG.92UG024D | -----T-- | O.CM.MVP5180 | PINMT-I-EGIAEVQD- |
| CONSENSUS-A | P-?-?-?-?-?-?-?-?-?- | (B7) | C.BR.92BR025 | D.UG.94UG1141 | -----P-- | O.GA.VI686 | -ISMV-E--G-H-VQEM |
| A.KE.K89 | P-K-?-?-?-?-?-?-?-?- | (2B7) | C.BW.BR911513 | D.UG.UG266A2 | -----P-- | O.GQ.341HA | TINMT-R--AMDVOEMR |
| A.KE.Q23CXCCG | P-T-K-I-?-?-?-?-?-?- | | C.DJ.DJ259A | D.ZR.84ZR085 | -----A-- | O.GQ.655HA | TLSMT-R--AIGVQEMR |
| A.RW.KIG93 | A-K-?-?-?-?-?-?-?-?- | | C.DJ.DJ373A | D.ZR.ELI | -----E-- | O.GQ.HIVU82990 | TINMT-R--AI-VQOVG |
| A.RW.SF1703 | T-?-?-?-?-?-?-?-?-?- | | C.ET.ETH2220 | D.ZR.NDK | -----Q-- | O.GQ.HIVU82991 | TINMT-R--AMDVOEMR |
| A.SE.SOSE7253 | P-T-?-?-?-?-?-?-?-?- | | C.IN.11246 | D.ZR.TYL | -----T-- | | -----s--?-?-?-? |
| A.SE.TZSE8538 | P-?-?-?-?-?-?-?-?-?- | | C.IN.301904 | D.ZR.YK1 | -----V-- | | -----FKV-I-A |
| A.SE.UGSE6594 | P-N-T-I--YH--TR-- | | C.SN.SE364A | D.ZR.WHO15474 | -----M-- | | -----SDRM-TPM |
| A.UA.AFO82486 | -I-I-?-?-?-?-?-?-?-? | | C.SO.SM145A | D.ZR.84ZR085 | -----P-- | | -----S-KI-T-M |
| A.UG.92UG037 | P-N-T-I--G--T-- | | C.UG.UG268A2 | D.ZR.EKI | -----I-- | | -----S--T |
| A.ZR.MA246 | -N-S-I-?-?-?-?-?-?-? | | CONSENSUS-D | D.ZR.ELI | -----A-- | | -----FY-K-TRT |
| A.ZR.MC108 | -K-?-?-?-F--R-- | | D.SN.SE365A2 | D.ZR.NDK | -----E-- | | -----S--K-TRM |
| AG.DJ.DJ263 | P-R--P-?-?-?-?-?-?-? | | D.TZ.87TZ4622 | D.ZR.TYL | -----M-- | | -----S--T-M |
| AG.DJ.DJ264 | P-R-?-?-?-?-?-?-?-? | | D.UG.92UG024D | D.ZR.WHO15474 | -----T-- | | -----S--T-- |
| AG.NG.IBN9 | P-K-?-?-?-?-?-?-?-? | | D.UG.C971412 | D.ZR.EKI | -----V-- | | -----S--T-- |
| AGI.GR.97PVCH | A-K-?-?-GL-?-?-GG-E | | D.UG.UG266A2 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| AGI.CY.94CY032 | A-K-?-?-G--G--V | | D.UG.WHO15474 | D.ZR.NDK | -----M-- | | -----S--T-- |
| AGI.GR.97PVMY | A-K-?-?-G--GV | | D.ZR.84ZR085 | D.ZR.TYL | -----M-- | | -----S--T-- |
| CONSENSUS-B | ----- | | CONSENSUS-E | D.ZR.YK1 | -----M-- | | -----S--T-- |
| B.AU.MBC18 | -T-V-?-?-?-?-?-?-?-? | | D.ZR.84ZR085 | D.ZR.WHO15474 | -----M-- | | -----S--T-- |
| B.BE.SIM184 | -V-?-?-?-SK--TL | | D.ZR.ELI | D.ZR.NDK | -----M-- | | -----S--T-- |
| B.CN.RL42 | -K-I-?-?-?-?-?-?-?-? | | D.ZR.YK1 | D.ZR.WHO15474 | -----M-- | | -----S--T-- |
| B.DE.D31 | -?-?-?-?-Y-S-R- | | D.ZR.NDK | D.ZR.YK1 | -----M-- | | -----S--T-- |
| B.DE.HAN | -?-?-?-?-G-- | | D.ZR.WHO15474 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| B.FR.HXB2 | -?-?-?-?-R-- | | D.ZR.YK1 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| B.FR.LAI | -?-?-?-?-R-- | | D.ZR.YK1 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| B.FR.PIH384 | -I-?-?-?-R-- | | D.ZR.YK1 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| B.GA.OYI | -?-?-?-?-NR- | | D.ZR.YK1 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| B.GB.CAM1 | P-?-?-?-L-- | | D.ZR.YK1 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| B.JP.ETR | T-K-I-?-K--RV | | D.ZR.YK1 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| B.NL.ACH320A | -A-?-?-?-G-- | | D.ZR.YK1 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| B.SP.89SP061 | -?-?-?-L-I--R- | | D.ZR.YK1 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| B.TH.TH936705 | -?-?-?-L-I--R- | | D.ZR.YK1 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| B.TT.QZ4589 | -V-?-?-?-S-- | | D.ZR.YK1 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| B.US.JRCSP | -K-?-?-?-S-- | | D.ZR.YK1 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| B.US.JRFL | -?-?-?-?-S-- | | D.ZR.YK1 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| B.US.MN | -Q-?-?-?-Y-K--R- | | D.ZR.YK1 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| B.US.RF | -Q-?-?-?-Y-K--R- | | D.ZR.YK1 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| B.US.SF2 | -A-?-?-?-A-- | | D.ZR.YK1 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| B.US.WEAU160 | -I-?-?-?-K-- | | D.ZR.YK1 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| B.ZR.MB314 | T-?-?-?-K-- | | D.ZR.YK1 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| | | | CONSENSUS-F | D.ZR.YK1 | -----M-- | | -----S--T-- |
| | | | F.BR.93BR0201 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| | | | F.BR.B2126A | D.ZR.YK1 | -----M-- | | -----S--T-- |
| | | | F.BR.B2163A | D.ZR.YK1 | -----M-- | | -----S--T-- |
| | | | F.FI.FIN6393 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| | | | G.BE.DRCBL | D.ZR.YK1 | -----M-- | | -----S--T-- |
| | | | G.FI.HH8793 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| | | | G.GA.LBV217 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| | | | G.SE.SE6165 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| | | | CONSENSUS-H | D.ZR.YK1 | -----M-- | | -----S--T-- |
| | | | H.BE.VI991 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| | | | H.BE.VI997 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| | | | H.CF.90CF056 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| | | | CONSENSUS-I | D.ZR.YK1 | -----M-- | | -----S--T-- |
| | | | J.SE.SE91733 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| | | | J.SE.SE92809 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| | | | N.CM.YBF30 | D.ZR.YK1 | -----M-- | | -----S--T-- |
| | | | CONSENSUS-J | D.ZR.YK1 | -----M-- | | -----S--T-- |
| | | | T.P-?-?-G--GGQV | D.ZR.YK1 | -----M-- | | -----S--T-- |

gp120 Epitope 31



| | | | | | | | | | | | | | | | | | | | |
|---|--|--|---|---|--|---|--|--|----------------------------------|---|--|--|--|--|---|--|--|--|--|
| CONSENSUS-B Epitope 31 CONSENSUS-A A.KE.K89 A.KE.Q23CXCCG A.RW.KI693 A.FW.SF1703 A.SE.SOSE7253 A.SE.TZSE8538 A.SE.UGSE6594 A.SE.UGSE8891 A.UA.AF082486 A.UG.92UG037 A.UG.U455 A.ZR.MA246 A.ZR.MC108 | CONSENSUS-B nNTLkqiV?kLreqgf? NNTLkQIDSKLREQFG -?-g?V?-q---?y-n -T-QKV-T---Y-G -K-QEVAE---TY-G -Q-QKVATQ-GKH-N -K-QGVANQ-KSY-S -K-QD-TQ---VYMN -K-HEVAKQ---TY-N -O-VAKQ---TY-G -EA-QKV-NQ-KTH-K -S-QK-STQ---RY-N -K-H-V-EQ---KVMN -R-IQ-VAEQ-KKK-N -EA-REY-KQ---TY-N -KA-QGV-KQ-QKY-G | CONSENSUS-C C.BI.BU910611 C.BI.BU910717 C.BI.BU910812 C.BR.92BR025 C.BR.BR911513 C.BW.BW96BW0502 C.DJ.DJ259A C.DJ.DJ373A C.ET.FTH2220 C.IN.11246 C.IN.21068 C.IN.301904 C.SN.SE364A C.SO.SM145A C.UG.UG268A2 | CONSENSUS-D D.SN.SE365A2 D.TZ.87TZ4622 D.UG.92UG024D D.UG.94UG1141 D.UG.C971412 D.UG.UG266A2 D.UG.WHO15474 D.ZR.84ZR085 D.ZR.ELI D.ZR.JY1 D.ZR.NDK D.ZR.Z226 | CONSENSUS-E F.BR.93BR0201 F.BR.B2126A F.BR.B2163A F.FI.FI16393 | CONSENSUS-F -k--erV?A--ksh-p R--AKVKA--GSY-P -K--ERVRA--KSH-P -K--E-VRA--KSH-P -K--DRVKA-E-KLH-N | CONSENSUS-G G.BE.DRCBL G.FI.HH8793 G.GA.LBV217 G.SE.SE6165 | CONSENSUS-H H.BE.VI991 H.BE.VI997 H.CF.90CF056 | CONSENSUS-I I.SE.SE91733 J.SE.SE92809 | CONSENSUS-J N.CM.YBF30 | CONSENSUS-K -?-g?V?----a-h-p SR-QEVS-R-A-H-P -H-E-VMER-KKH-P -D-QKVRT--AGY-S -K-QEVGK--A-H-P -K-QEVGK--A-H-P -S-QGVSK--E-H-S -E-RKVR--KTL-R -K-QVKK--QKH-P -K-QVKK--QKH-P -E-QRVSE-AKH-P -E-QNVSK--A-H-P -K-QVKK--A-H-P -K-QVKK--A-H-P -R-QVSK--A-H-P -I-QVRE--KRH-P | CONSENSUS-L -k--h-v?Tq-g?y-- -E-HKVT--GSY-D -K-Q-ATQ-SKY-V -K--H-V-TQ-GIHLN | CONSENSUS-M -k--h-v?Tq-g?y-- -E-HKVT--GSY-D -K-Q-ATQ-SKY-V -K--H-V-TQ-GIHLN | CONSENSUS-N -k--h-v?Tq-g?y-- -E-HKVT--GSY-D -K-Q-ATQ-SKY-V -K--H-V-TQ-GIHLN | CONSENSUS-O O.CM.ANT70C O.CM.CM4974 O.CM.MVP5180 O.GA.VI686 O.GQ.341HA O.GQ.655HA O.GQ.HIV082990 O.GQ.HIV082991 | CONSENSUS-P ee----taeryL-lvn GKI---TAERYL-LVN IEA-N-TAQ-YIKLVN E-A-Q-TAIRYL-LVN EKA---MTERYL-LVN KE---HTAERYL-LVN EE---TAERYL-LVN ER-Q-TAERYL-LVN EE---TAERYL-LVN | CONSENSUS-Q -?y--Vt---k-H-n KE---VTR---HLN -RV---VMG--K-H-N -KV---VTK--K-H-K -EV-R-VTE--K-H-I -KV-N-VTE--K-H-N -EV-T-VTG--KVH-K -KV---VTE--K-H-N -K---V-G--K-H-N YEV---VTK--K-H-T | CONSENSUS-R R.VE.VE.VK.-ALATSS EQARNKTEHV-A-HWK | CONSENSUS-S S---RRVAT---H-N S---RRVAT---H-N | CONSENSUS-T EPMMNRTREIKKILIG |
|---|--|--|---|---|--|---|--|--|----------------------------------|---|--|--|--|--|---|--|--|--|--|

gp120 Epitope 44



| | | | | | |
|--|---|--------------------|---------------------------|----------------------|------------------------------|
| CONSENSUS-B Epitope 44 CONSENSUS-A | KAWYAPPIRGQIRCSsNITG KAWYAPPIRSQIRCSsNITG (A2) | CONSENSUS-C | I-----?--t-k----- | CONSENSUS-O | SGL-----NLT-t----- |
| AKERK89 | Q-----Q-I-K-V----- | CBIBU910611 | Q-----K-N-T-K----- | OCMANT70C | SGL-----K-NLT-M----- |
| AKEQ23CXCCG | Q-----P-V-K-E----- | CBIBU910717 | R-----S-I-T-K----- | OCMCM4974 | SGL-----K-N-T-Q----- |
| ARWKIG93 | Q-----E-I--D----- | CBIBU910812 | Q-----K-N-T-K----- | OCMMW/P5180 | SRI-----P-NLT-H----- |
| ARMSF1703 | Q-I-----Q-V-K-I----- | CBR92BR025 | R-----E-IIT-R----- | OGAVI686 | SGL-----R-NLT-I-H----- |
| ASESOSF7253 | -I-----P-I-----E----- | CBRR911513 | R-I-----I-T-R----- | OGQ341HA | SGL-----K-NLT-T----- |
| ASETZSE8538 | -I-----Q-V-E----- | CBWBW96BW0502 | R-----A-NLT-E-D----- | OGQ655HA | SGL-----R-NLT-T----- |
| ASEUGSE8594 | Q-I-----Q-V-K-E----- | CDJDU259A | R-----K-I-T-K-V----- | OGOHIVU82990 | SGI-----P-NLT-T-D----- |
| ASEUGSE8891 | Q-I-----Q-V-E----- | CDJDU373A | R-----Q-I-A-K----- | OGQHTVU82991 | SGL-----Q-NLT-T----- |
| AUAAF082486 | Q-----K-S-E----- | CETETH220 | R-----E-I-M-R----- | | |
| AUG92UG037 | Q-----Q-V-K-E----- | CIN11246 | R-----A-N-T-K----- | | |
| AUGU455 | Q-I-----Q-V-E----- | CIN21068 | R-----E-K-T-R----- | CONSENSUS-AE | q-----s-?-N-V----- |
| AZRMW246 | Q-I-----Q-V-E----- | CIN301904 | R-----E-N-T-K----- | AECF90CR402 | R-----SEV-N-V----- |
| AZRMW108 | Q-I-----Q-V-V-D----- | CIN301904 | R-----A-N-T-K----- | AETHKH03 | Q-----S-I-N-L----- |
| AGDJDU263 | L-----S-E--K----- | CSNSSE364A | R-I-----A-N-T-K----- | AETHKH08 | Q-----E-R-N-V----- |
| AGDJDU264 | R-----P-E--E----- | CSOSM145A | Q-----K-N-T-T----- | AETHH93TH253 | Q-----S-R-N-V----- |
| AGNGI8NG | Q-----Q-I--D----- | CUGUG268A2 | R-----K-K-T-R----- | AETHH93TH253 | Q--N--S-N-N-V----- |
| AGIGR97PVCH | Q-----A-S-N--D----- | CONSENSUS-D | | AETHHA01021 | Q-K-----S-T-N-V----- |
| AGICY94CY032 | Q-----S-A-S-N--D----- | DSNSE365A2 | | AETHM11429A31 | Q-K-----S-K-N-V----- |
| CONSENSUS-B | | DTZ87TZ4622 | | AETHCM240 | Q-----S-R-N-V----- |
| BAUMBC18 | -----R--K-T----- | DUG92UG024D | | AETHTH921110 | Q-----S-R-N-V----- |
| BBESI84 | -----E-H----- | DUG94UG1141 | | CONSENSUS-CPZ | qGI-??-PR-N??-?-????? |
| BCNRL42 | -----E----- | DUG977412 | | CPZGAB | RGI-----R-N-T-N----- |
| BDED31 | -----S----- | DUGU266A2 | T-----E-L-K----- | CPZANT | -GI-LA-RR-NVS-T-SITG |
| BDEHAN | -----G-L----- | DUGWH015474 | | | |
| BFRHXB2 | -----S----- | DZR84ZRO85 | | | |
| BFLRLAI | -----S----- | DZREL1 | -I-----ERN-L----- | | |
| BFRPIH384 | -----R--K----- | DZRLY1 | -E-L-K-T----- | | |
| BGAOYI | -----S-----K----- | DZRNDK | -E-L-K----- | | |
| BGBCAM1 | -----T-T-S----- | DZR22Z6 | -E--N----- | | |
| BJPETR | -----R----- | CONSENSUS-F | R--a--a-N-T-N----- | | |
| BNIACH320A | -----S----- | FBR93BR0201 | R---N--A-N-T-N----- | | |
| BSP89SP061 | -----R----- | FBRB2126A | R---A--E-N-T-N----- | | |
| BHTH936705 | -----R----- | FBRB2163A | R---A--SEN-T-N----- | | |
| BTTQZ4589 | -----R-Y-N----- | FFIFIN6393 | R---A--A-N-T-N----- | | |
| BUSJRCSP | -----K----- | CONSENSUS-G | Q-----A-N-t-k----- | | |
| BUSJRF1 | -----R----- | GBEDRCBL | Q-----A-N-T-R----- | | |
| BUSMN | -----E----- | GFIHH8793 | Q---S---ARN-T-K----- | | |
| BUSRF | -----S-K-I----- | GGALBV217 | Q-----A-N-T-K----- | | |
| BUSSF2 | -----G-S----- | GSESE6165 | Q-----A-N-E-N-S----- | | |
| BUSWEAUI60 | -----E--L----- | CONSENSUS-H | q-----n-t-v----- | | |
| BZRM314 | -----R-I-S----- | HBEVI91 | Q-----R-N-T-I----- | | |
| | | HBEVI97 | Q-----K-S-T-V----- | | |
| | | HCF90CF056 | R-----Q-N-M-V----- | | |
| | | CONSENSUS-J | Q-I-----A-N-T-?-? | | |
| | | JSESE91733 | Q-I-----A-N-T-K----- | | |
| | | JSESE92809 | Q-I-----A-N-T-T----- | | |
| | | NCMYRF30 | -GI-----R-VIN-T----- | | |

gp120 Epitope 45

| | | | | | |
|--|--|--------------------|----------------------------|----------------------|----------------------------|
| CONSENSUS-B Epitope 45 CONSENSUS-A | vkIEPLGVAPPTKAKRRVVQR VKIEPLGVAPPTKAKRRVVQR (A2) | CONSENSUS-C | -E-K-?-? | CONSENSUS-O | -r?K-Fs-?-?1a-p-igt |
| A.KE.K89 | -----E- | C.BI.BU910611 | -E-K--I-----E- | O.CM.ANT70C | -RYK-FS---R1A-P-IST |
| A.KE.Q023XCXCCG | -E-----E- | C.BI.BU910717 | -E-K--I-S-----E- | O.CM.CM4974 | -QVK-FS-----VS-PIISL |
| A.RW.KI693 | -----T-----E- | C.BI.BU910812 | -E-K-----A-----E- | O.CM.MVP5180 | -Q-K-FS---WS-PIINI |
| A.RM.SF1703 | -----P-----E- | C.BR.92BR025 | -E-K--I-----E- | O.GA.VI686 | -RYK-FS---IA-P-IGT |
| A.SE.SOSE7253 | -----R-R-----E- | C.BW.BW96BW0502 | -E-K-----E- | O.GQ.341HA | -R-K-FS---PIA-P-IGT |
| A.SE.TZSE8538 | -----Q-R---K-E- | C.DJ.DJ259A | -E-K-V-I-----G- | O.GQ.655HA | -R-K-FS---HTA-P-IGT |
| A.SE.UGSE6594 | -----P-----E- | C.DJ.DJ373A | -E-K--L-----E- | O.GQ.HIV082990 | -RYK-FS---HTS-P-IGT |
| A.SE.UGSE8891 | -----R-R-----E- | C.ET.FTH2220 | -E-K-----P-----E- | O.GQ.HIV082991 | -R-K-FS---PIA-P-IGT |
| A.UA.AF082486 | -----I-L-R-R---E- | C.IN.11246 | -E-Q-----E- | | |
| A.UG.92UG037 | -----R-----E- | C.IN.21068 | -E-K-----T-----E- | CONSENSUS-AE | -q-----i---r-----e- |
| A.UG.U455 | -----R-----E- | C.IN.301904 | -E-K-----T-----E- | AE.CF.90CGR402 | -Q-----I---R-----E- |
| A.ZR.MA246 | -----R-----E- | C.SN.SE364A | -E-K--I-----E- | AE.TH.KH03 | -R-----I---R-----E- |
| A.ZR.MC108 | -----R-----E- | C.SO.SM145A | -E-K--I-G-----E- | AE.TH.KH08 | -Q-----I---R-----E- |
| AG.DJ.DJ263 | -----R-----E- | C.UG.UG268A2 | -E-VK-----E- | AE.TH.TH920149 | -E-----I---R-----E- |
| AG.DJ.DJ264 | -----R-P-----E- | CONSENSUS-D | -vk1EPLG7APTAK-R-Ve | AE.TH.93TH253 | -Q-----I---R-----E- |
| AG.NG.IMG | -----H-----E- | D.SN.SE365A2 | RL-----T-----K- | AE.TH.A01021 | -Q-----I---R-----E- |
| AGI.GR.97PVCH | -----V-I--G-R---K | D.TZ.87TZ4622 | RL--I-L-----E- | AE.TH.CM240 | -Q-----I---R-----E- |
| AGI.CY.94CY032 | -----I--N--R--- | D.UG.92UG024D | -L--I-L-R-----A- | AE.TH.E11429.A31 | -Q-----L-----E- |
| AGI.GR.97PVMY | -Q--V---R-R----- | D.UG.94UG141 | -L--I-L-R-----E- | AE.TH.TH921110 | -Q-----I---R-----E- |
| CONSENSUS-B | -----I--R----- | D.UG.C971412 | IRL--L-R---E- | CONSENSUS-CPZ | -?--?-S-----???-??? |
| B.AU.MBC18 | -QV---I--R----- | D.UG.WHO15474 | -----I--T-----E- | CPZGAB | -R-----S-----R-HT-A- |
| B.BE.SIM184 | -----R----- | D.ZR.84ZR085 | -Q-----R-----E- | CPZAMT | -E-X-S-----IX--PEIKQ |
| B.CN.RL42 | -----R----- | D.ZR.EI1 | -R-----I---R-----E- | | |
| B.DE.D31 | -----R----- | D.ZR.TY1 | -----I---R-----E- | | |
| B.DE.HAN | -----R----- | D.ZR.NDK | -----I---R-----E- | | |
| B.FR.HXB2 | -----R----- | D.ZR.Z226 | -----R-----E- | | |
| B.FR.LAI | -----I----- | CONSENSUS-F | -E-----r---q--? | | |
| B.FR.PIH384 | -----R----- | F.BR.93BR0201 | -E-----Q--K- | | |
| B.GA.OYT | -----R----- | F.BR.B2126A | -E-----R--Q--K- | | |
| B.GB.CAM1 | -----R----- | F.BR.B2163A | -E-----R--Q--R- | | |
| B.JP.ETR | -----R----- | F.FI.FIN6393 | -E-----RP--P--R- | | |
| B.NL.ACH320A | -----R----- | CONSENSUS-G | ---K?---?-R---?-? | | |
| B.SP.89SP061 | -----R----- | G.BE.DRCBL | ---KS--I--R--R---E- | | |
| B.TH.TH936705 | -----R----- | G.FI.HH8793 | ---K-----R---G- | | |
| B.TT.Q24589 | -----R----- | G.GA.LBV217 | I--K-----R---G- | | |
| B.US.JRC5F | -----R----- | G.SE.SE6165 | ---KS-----R--R---E- | | |
| B.US.JRFL | -----T----- | CONSENSUS-H | -----e-R---E- | | |
| B.US.MN | -----R----- | H.BE.VI991 | -----E-R---E- | | |
| B.US.RF | -----R----- | H.BE.VI997 | -----E-R---E- | | |
| B.US.SF2 | I-----I----- | H.CF.90CF056 | -----I---TR---E- | | |
| B.US.WEAU160 | -Q-----I----- | CONSENSUS-J | -E?-----E- | | |
| B.ZR.MB314 | -----I----- | J.SE.SE91733 | -EL-----E- | | |
| | | J.SE.SE92809 | -E-----E- | | |
| | | N.CM.YBF30 | -S---I---G---T-S- | | |