

## P15 Epitope 2

<b>CONSENSUS-B</b> Epitope 2 <b>CONSENSUS-A</b>	<b>GNF1QSRPEPTAPPe</b> <b>GNF1QSRPEPTAPPe</b> <b>GNF1QSRPEPTAPPe</b>	<b>CONSENSUS-D</b> D.UG.94UG1141 D.ZR.84ZR085 D.ZR.INDK D.ZR.Z2Z6	----- <b>A</b> -----PAEPTAP ----- <b>A</b> ----- <b>A</b> ----- <b>A</b>
A.KE.Q23-CXC-CG A.SE.SOSE7253 A.SE.TZSE8538 A.SE.UGSE6594 A.SE.UGSE7535 A.UG.92UG037 A.UG.U455	---P-N-L----- <b>A</b> ---P----- <b>A</b> ---P----- <b>A</b> ---P----- <b>A</b> ---P-L----- <b>A</b> ---P----- <b>A</b> ---P----- <b>A</b>	<b>CONSENSUS-F</b> F.BR.93BR0201 F.FI.FIN6393 F.BR.B2162 F.ZR.VI1174 F.BE.VI325 F.RW.VI69	----- <b>A</b> ---I-N----- <b>A</b> ----- <b>A</b> ----- <b>A</b> ----- <b>A</b> ----- <b>A</b> ----- <b>A</b> -----S----- <b>A</b>
AE.CF.90CF402 AE.TH.93TH253 AE.TH.CM240	---P----- <b>M</b> ---P-K----- <b>A</b> ---P----- <b>A</b>	<b>CONSENSUS-G</b> G.BE.DRCBL G.FI.HH8793 G.SE.SE6165	----- <b>A</b> ---N----- <b>A</b> ---N----- <b>A</b> ---N-T----- <b>A</b>
AG.DJ.DJ263 AG.DJ.DJ264 AG.ING.IBNG	---P----- <b>A</b> ---P----- <b>A</b> ---P----- <b>A</b>	<b>CONSENSUS-H</b> H.BE.VI991 H.BE.VI997 H.CF.90CF056	----- <b>A</b> ---P-K-L----- <b>A</b> ----- <b>A</b> ----- <b>A</b>
AGI.CY.94CY032 AGI.GR.97PVGH AGI.GR.97PVWV	---N----- <b>A</b> ---T----- <b>A</b> ---T----- <b>A</b>	<b>CONSENSUS-J</b> J.SE.SE91733 J.SE.SE92809	----- <b>A</b> ----- <b>A</b> ----- <b>A</b>
<b>CONSENSUS-B</b>	<b>GNF1QSRPEPTAPPe</b>	N.CM.YBF30	---P-TTRRKEPTAP
B.AU.MBC18 B.CN.RL42 B.DE.D31 B.FR.HXB2 B.FR.LAI B.GA.OYI B.GB.CAML B.GB.MANC B.JP.UH31 B.NL.ACH320A B.SP.89SP061 B.US.JRC5F B.US.MN B.US.RF B.US.SF2 B.US.WEAU160	----- <b>LQ</b> ----- <b>R</b> ----- <b>A</b> ----- <b>A</b> ----- <b>A</b> ----- <b>A</b> ----- <b>A</b> ----- <b>A</b> ----- <b>A</b> ----- <b>A</b> ----- <b>A</b> ----- <b>A</b> ----- <b>A</b> ----- <b>A</b> ----- <b>A</b> ----- <b>A</b> ----- <b>A</b>	<b>CONSENSUS-O</b> O.CM.ANT70C O.CM.WVP5180	---YV-???-S--- <b>M</b> ---YV-RPAH-S--- <b>M</b> ---YV-KQVS-S--- <b>M</b>
<b>CONSENSUS-C</b>	----- <b>a</b>	<b>CONSENSUS-CPZ</b> CPZGAB CPZANT	---V-???----- <b>I</b> ---V-N-T----- <b>I</b> ---V-KEEVVEPTAP

## Pol Epitope 1,2

<b>CONSENSUS-B</b> Epitope # 1(A*6802,A*740) 2 (A19)	<b>ITLMWRPILV</b> <b>ITLMWRPILV</b> <b>ITLMWRPILV</b>	<b>CONSENSUS-D</b> D.UG.94UG114 D.ZR.84ZR085 D.ZR.ELI D.ZR.INDK D.ZR.Z2Z6	----- <b>V</b> ----- <b>V</b> ----- <b>I</b> ----- <b>I</b> ----- <b>I</b> ----- <b>I</b>
A.KE.Q2317 A.SE.SOSE7253 A.SE.TZSE8538 A.SE.UGSE8891 A.UG.92UG037 A.UG.U455	----- <b>A</b> ----- <b>A</b> ----- <b>A</b> ----- <b>F</b> ----- <b>A</b> ----- <b>A</b>	<b>CONSENSUS-F</b> F.BR.93BR020 F.FI.FIN363	----- <b>I</b> ----- <b>I</b> ----- <b>I</b> ----- <b>I</b> ----- <b>I</b> ----- <b>I</b>
AE.CF.90CF402 AE.TH.93TH253 AE.TH.CM240	----- <b>A</b> ----- <b>A</b> ----- <b>A</b>	<b>CONSENSUS-H</b> H.BE.VI991 H.BE.VI997 H.CF.90CF056	----- <b>I</b> ----- <b>I</b> ----- <b>I</b>
AG.DJ.DJ263 AG.DJ.DJ264 AG.ING.IBNG	----- <b>A</b> ----- <b>A</b> ----- <b>A</b>	<b>CONSENSUS-J</b> J.SE.SE91733 J.SE.SE92809	----- <b>I</b> ----- <b>I</b> ----- <b>I</b>
AGI.CY.94CY032 AGI.GR.97PVGH AGI.GR.97PVWV	----- <b>P</b> ----- <b>P</b> ----- <b>P</b>	N.CM.YBF30	----- <b>VI</b>
<b>CONSENSUS-B</b>	----- <b>I</b>	<b>CONSENSUS-O</b> O.CM.ANT70 O.CM.WVP5180	---P-D-- <b>I</b> ---P-D-- <b>I</b> ---P-D-- <b>I</b>
B.AU.MBC18 B.CN.RL42 B.DE.D31 B.FR.HXB2R B.FR.LAI B.GA.OYI B.GB.CAML B.NL.ACH320A B.US.JRF1 B.US.MN B.US.RF B.US.SF2 B.US.WEAU160	----- <b>I</b> ----- <b>I</b> ----- <b>I</b> ----- <b>I</b> ----- <b>I</b> ----- <b>I</b> ----- <b>I</b> ----- <b>I</b> ----- <b>I</b> ----- <b>I</b> ----- <b>I</b> ----- <b>I</b> ----- <b>I</b>	<b>CONSENSUS-CPZ</b> CPZGAB CPZANT	---P----- <b>??</b> ---P----- <b>??</b> ---P----- <b>MM</b>
<b>CONSENSUS-C</b>	----- <b>a</b>	<b>CONSENSUS-C</b> C.BR.92BR025 C.BW.96BW0502 C.ET.ETH2220 C.IN.11246 C.IN.21068 C.IN.301999	----- <b>a</b> ----- <b>a</b> ----- <b>a</b> ----- <b>a</b> ----- <b>a</b> ----- <b>a</b> ----- <b>a</b>







### RT Epitope 7,8

<b>CONSENSUS-B</b>	<b>ALVEICTEMEK</b>	<b>CONSENSUS-D</b>	<b>CONSENSUS-F</b>
Epitope #	HLA	D.UG.94UG114	F.BR.93BR020
7	ALVICTEM (A2)	D.ZR.84ZR085	F.FI.FIN9363
8	ALVICTEMEK (A3)	D.ZR.ELI	<b>CONSENSUS-G</b>
<b>CONSENSUS-A</b>		D.ZR.NDK	G.BE.DRCBL
A.KE.Q2317		D.ZR.Z2Z6	G.FI.HH8793-11
A.SE.SOSE7253			G.SE.SE6165
A.SE.TZSE8538			
A.SE.UGSE8891			
A.UG.92UG037			
A.UG.U455			
AE.CF.90CF402			
AE.TH.93TH253			
AE.TH.CM240			
AG.DJ.DJ263			
AG.DJ.DJ264			
AG.ING.IBNG			
AGI.CY.94CY0323			
AGI.GR.97PVCH			
AGI.GR.97PVMY			
<b>CONSENSUS-B</b>			
B.AU.MBC18			
B.CN.CNRL42			
B.DE.D31			
B.FR.HXB2R			
B.FR.LAI			
B.GA.OYI			
B.GB.CAML			
B.NL.ACH320A			
B.US.JRFL			
B.US.MN			
B.US.RF			
B.US.SF2			
B.US.WEAU160			
<b>CONSENSUS-C</b>			
C.BR.92BR025			
C.BW.96BW0502			
C.ET.ETH2220			
C.IN.11246			
C.IN.21068			
C.IN.301999			

### Pol Epitope 9,10

<b>CONSENSUS-B</b>	<b>CTEMEKKGKISKIGP</b>	<b>CONSENSUS-D</b>	<b>CONSENSUS-F</b>
Epitope #	HLA	D.UG.94UG114	F.BR.93BR020
9	CTEMEKKGKISKIGP (broad)	D.ZR.84ZR085	F.FI.FIN9363
10	EKEGKISKI (B51)	D.ZR.ELI	<b>CONSENSUS-G</b>
<b>CONSENSUS-A</b>		D.ZR.NDK	G.BE.DRCBL
A.KE.Q2317		D.ZR.Z2Z6	G.FI.HH8793-11
A.SE.SOSE7253			G.SE.SE6165
A.SE.TZSE8538			
A.SE.UGSE8891			
A.UG.92UG037			
A.UG.U455			
AE.CF.90CF402			
AE.TH.93TH253			
AE.TH.CM240			
AG.DJ.DJ263			
AG.DJ.DJ264			
AG.ING.IBNG			
AGI.CY.94CY0323			
AGI.GR.97PVCH			
AGI.GR.97PVMY			
<b>CONSENSUS-B</b>			
B.AU.MBC18			
B.CN.CNRL42			
B.DE.D31			
B.FR.HXB2R			
B.FR.LAI			
B.GA.OYI			
B.GB.CAML			
B.NL.ACH320A			
B.US.JRFL			
B.US.MN			
B.US.RF			
B.US.SF2			
B.US.WEAU160			
<b>CONSENSUS-C</b>			
C.BR.92BR025			
C.BW.96BW0502			
C.ET.ETH2220			
C.IN.11246			
C.IN.21068			
C.IN.301999			

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**Pol Epitope 11**

<b>CONSENSUS-B</b> Epitope 11 <b>CONSENSUS-A</b>	<b>TVLDVGDGAY</b> TVLDVGDGAY (B35)	<b>CONSENSUS-F</b> F.BR.93BR020 F.FI.FIN9363	----- ----- -----
A.KE.Q2317	-----	<b>CONSENSUS-G</b> G.BE.DRCBL G.FI.HH8793-11 G.SE.SE6165	----- ----- A----- -----
A.SE.SOSE7253	-----	<b>CONSENSUS-H</b> H.BE.VI991 H.BE.VI997 H.CF.90CF056	<b>S</b> ----- S-----G-- S----- S-----
A.SE.TZSE8538	-----	<b>CONSENSUS-I</b> I.BE.VI997 I.CF.90CF056	----- ----- -----
A.UG.92UG037	-----	<b>CONSENSUS-J</b> J.SE.SE91733 J.SE.SE92809	----- ----- -----
A.UG.U455	-----	<b>CONSENSUS-K</b> K.CM.YBF30	----- -----
AE.CF.90CF402	-----	<b>CONSENSUS-L</b> L.CM.ANT70 L.CM.MVP5180	----- ----- -----
AE.TH.93TH253	-----	<b>CONSENSUS-M</b> M.CM.YBF30	----- -----
AE.TH.CM240	-----	<b>CONSENSUS-N</b> N.CM.YBF30	----- -----
AG.DJ.DJ263	-----	<b>CONSENSUS-O</b> O.CM.ANT70 O.CM.MVP5180	----- ----- -----
AG.DJ.DJ264	-----	<b>CONSENSUS-P</b> P.ZGAB P.ZANT	----- ----- -----
AG.NG.IBNG	-----		-----
AGI.CY.94CY0323	-----		-----
AGI.GR.97PVCH	-----		-----
AGI.GR.97PVMY	-----		-----
<b>CONSENSUS-B</b>	-----		-----
B.AU.MBC18	-----		-----
B.CN.CNRL42	-----		-----
B.DE.D31	-----		-----
B.FR.HXB2R	-----		-----
B.FR.LAI	-----		-----
B.GA.OYI	-----		-----
B.GB.CAM1	-----		-----
B.NL.ACH320A	-----		-----
B.US.JRFL	-----		-----
B.US.MN	-----		-----
B.US.RF	-----		-----
B.US.SF2	-----		-----
B.US.WEAU160	-----		-----
<b>CONSENSUS-C</b>	-----		-----
C.BR.92BR025	-----		-----
C.BW.96BW0502	-----M-----		-----
C.ET.ETH2220	-----		-----
C.IN.11246	-----		-----
C.IN.21068	-----		-----
C.IN.301999	-----		-----
<b>CONSENSUS-D</b>	-----		-----
D.UG.94UG114	-----		-----
D.ZR.84ZR085	-----		-----
D.ZR.ELI	-----		-----
D.ZR.NDK	-----		-----
D.ZR.ZZ26	-----		-----

**Pol Epitope 12,13**

<b>CONSENSUS-B</b> Epitope #	<b>VLDVGDAYFSV</b> VLDVGDAYFSV (A*0201) VLDVGDAYFSV (A2)	<b>CONSENSUS-D</b> D.UG.94UG114 D.ZR.84ZR085 D.ZR.ELI D.ZR.NDK D.ZR.ZZ26	----- ----- -----I ----- ----- -----
A.KE.Q2317	-----	<b>CONSENSUS-E</b> E.BR.93BR020 E.FI.FIN9363	----- ----- -----
A.SE.SOSE7253	-----	<b>CONSENSUS-F</b> F.BE.VI991 F.BE.VI997 F.CF.90CF056	----- ----- ----- -----
A.SE.TZSE8538	-----	<b>CONSENSUS-G</b> G.BE.DRCBL G.FI.HH8793-11 G.SE.SE6165	----- ----- ----- -----
A.UG.92UG037	-----	<b>CONSENSUS-H</b> H.BE.VI991 H.CF.90CF056	----- ----- -----
A.UG.U455	-----	<b>CONSENSUS-I</b> I.CM.ANT70 I.CM.MVP5180	----- ----- -----
AE.CF.90CF402	-----	<b>CONSENSUS-J</b> J.CM.YBF30	----- -----
AE.TH.93TH253	-----	<b>CONSENSUS-K</b> K.CM.ANT70 K.CM.MVP5180	----- ----- -----
AE.TH.CM240	-----	<b>CONSENSUS-L</b> L.CM.YBF30	----- -----
AG.DJ.DJ263	-----	<b>CONSENSUS-M</b> M.CM.YBF30	----- -----
AG.DJ.DJ264	-----	<b>CONSENSUS-N</b> N.CM.ANT70 N.CM.MVP5180	----- ----- -----
AG.NG.IBNG	-----	<b>CONSENSUS-O</b> O.CM.ANT70 O.CM.MVP5180	----- ----- -----
AGI.CY.94CY0323	-----	<b>CONSENSUS-P</b> P.ZGAB P.ZANT	----- ----- -----
AGI.GR.97PVCH	-----		-----
AGI.GR.97PVMY	-----		-----
<b>CONSENSUS-B</b>	-----		-----
B.AU.MBC18	-----		-----
B.CN.CNRL42	-----		-----
B.DE.D31	-----		-----
B.FR.HXB2R	-----		-----
B.FR.LAI	-----		-----
B.GA.OYI	-----		-----
B.GB.CAM1	-----		-----
B.NL.ACH320A	-----		-----
B.US.JRFL	-----		-----
B.US.MN	-----		-----
B.US.RF	-----		-----
B.US.SF2	-----		-----
B.US.WEAU160	-----		-----
<b>CONSENSUS-C</b>	-----		-----
C.BR.92BR025	-----		-----
C.BW.96BW0502	-----M-----		-----
C.ET.ETH2220	-----		-----
C.IN.11246	-----		-----
C.IN.21068	-----		-----
C.IN.301999	-----		-----
<b>CONSENSUS-D</b>	-----		-----
D.UG.94UG114	-----		-----
D.ZR.84ZR085	-----		-----
D.ZR.ELI	-----		-----
D.ZR.NDK	-----		-----
D.ZR.ZZ26	-----		-----

**Pol Epitope 14,15**

CONSENSUS-B	VPLDKdFRKX	HLA	CONSENSUS-D	-----e-----
Epitope #	VPLDKdFRKX	(B35)	D.UG.94UG114	---HE---
14	VPLDEDFRKY	(B35)	D.ZR.84ZR085	---I--CE---
15	VPLDKdFRKX	(B*3501)	D.ZR.ELI	-----E-----
			D.ZR.NDK	-----E-----
			D.ZR.Z2Z6	-----E-----
<b>CONSENSUS-A</b>	-----e-----			
A.KE.Q2317	---HEF---		F.BR.93BR020	-----E-----
A.SE.SOSE7253	---ES----		F.FI.FIN9363	-----E-----
A.SE.TZSE8538	---ES----			
A.SE.UGSE8891	---N----		<b>CONSENSUS-G</b>	-----E?-----
A.UG.92UG037	---ES----		G.BE.DRCBL	---EN---
A.UG.U455	---ES----		G.FI.HH8793-11	---ES---
			G.SE.SE6165	---E----
AE.CF.90CF402	---EG----			
AE.TH.93TH253	---ES----		<b>CONSENSUS-H</b>	---HE---
AE.TH.CM240	---ES----		H.BE.VI991	---HE---
			H.BE.VI997	---HE---
AG.DJ.DJ263	-----		H.CF.90CF056	---E----
AG.DJ.DJ264	-----			
AG.NG.IBNG	-----		<b>CONSENSUS-J</b>	---YE---
AGI.CY.94CY0323	---PE---		J.SE.SE91733	---YE---
AGI.GR.97PVCH	---PA---		J.SE.SE92809	---YE---
AGI.GR.97PVMY	---PE---		N.CM.YBF30	---C-----
<b>CONSENSUS-B</b>	-----		<b>CONSENSUS-O</b>	---C--P-----
B.AU.MBC18	---EN---		O.CM.ANT70	---C--P-----
B.CN.CNRL42	---E----		O.CM.MVP5180	---C--P-----
B.DE.D31	---E----			
B.FR.HXB2R	---E----		<b>CONSENSUS-CPZ</b>	---?--?-----
B.FR.IAI	---E----		CPZGAB	---C--?-----
B.GA.OYI	---E----		CPZANT	---I--Q-----
B.GB.CAML	-----			
B.NL.ACH320A	-----			
B.US.JRFL	-----			
B.US.MN	-----			
B.US.RF	---E----			
B.US.SF2	---E----			
B.US.WEAU160	---E----			
<b>CONSENSUS-C</b>	---?E?-----			
C.BR.92BR025	---EG---			
C.BW.96BW0502	---EG---			
C.ET.ETH2220	---EG---			
C.IN.11246	---YE---			
C.IN.21068	---YE---			
C.IN.301999	---YE---			

**Pol Epitope 16**

CONSENSUS-B	TAFTTPSI	CONSENSUS-D	-----?-----
Epitope 16	TAFTTPSI	D.UG.94UG114	-----T-----
<b>CONSENSUS-A</b>	TAFTTPSI	D.ZR.84ZR085	-----T-----
A.KE.Q2317	-----t	D.ZR.ELI	-----S---
A.SE.SOSE7253	-----T	D.ZR.NDK	-----T-----
A.SE.TZSE8538	-----T	D.ZR.Z2Z6	-----T-----
A.SE.UGSE8891	-----T		
A.UG.92UG037	-----T		
A.UG.U455	-----T		
AE.CF.90CF402	-----T		
AE.TH.93TH253	-----T		
AE.TH.CM240	-----T		
AG.DJ.DJ263	-----T		
AG.DJ.DJ264	-----V		
AG.NG.IBNG	-----V		
AGI.CY.94CY0323	-----T		
AGI.GR.97PVCH	-----T		
AGI.GR.97PVMY	-----T		
<b>CONSENSUS-B</b>	-----		
B.AU.MBC18	-----V		
B.CN.CNRL42	-----V		
B.DE.D31	-----V		
B.FR.HXB2R	-----V		
B.FR.IAI	-----V		
B.GA.OYI	-----V		
B.GB.CAML	-----T		
B.NL.ACH320A	-----V		
B.US.JRFL	-----V		
B.US.MN	-----V		
B.US.RF	-----V		
B.US.SF2	-----V		
B.US.WEAU160	-----V		
<b>CONSENSUS-C</b>	-----		
C.BR.92BR025	-----		
C.BW.96BW0502	-----		
C.ET.ETH2220	-----T		
C.IN.11246	-----		
C.IN.21068	-----		
C.IN.301999	-----R		



**Pol Epitope 17-20**

CONSENSUS-B Epitope #	WKGSPATFQSSMT HLA (B7)	CONSENSUS-D D.UG.94UG114 D.ZR.84ZR085 D.ZR.ELI D.ZR.NDK D.ZR.Z2Z6
17	WKGSPATFQSSMT SPATFQSSM (B35)	-----I
18	SPATFQSSM (B35)	-----
19	SPATFQSSM (B*3501)	-----
20	SPATFQSSMT (B7)	-----?----
<b>CONSENSUS-A</b>		
A.KE.Q2317	-----	
A.SE.SOSE7253	-----	
A.SE.TZSE8538	-----S-----	
A.SE.UGSE8891	-----I-----	
A.UG.92UG037	-----A-----	
A.UG.U455	-----S-----	
AE.CF.90CF402	-----	
AE.TH.93TH253	-----	
AE.TH.CM240	-----	
AG.DJ.DJ263	-----A-----	
AG.DJ.DJ264	-----A-----	
AG.ING.IBNG	-----A-----	
AGI.CY.94CY0323	-----C-----	
AGI.GR.97PVCH	-----Y-----	
AGI.GR.97PVMY	-----C-----	
<b>CONSENSUS-B</b>		
B.AU.MBC18	-----	
B.CN.CNRL42	-----C-----	
B.DE.D31	-----	
B.FR.HXB2R	-----	
B.FR.LAI	-----	
B.GA.OYI	-----	
B.GB.CAML	-----	
B.NL.ACH320A	-----C-----	
B.US.JRFL	-----	
B.US.MN	-----	
B.US.RF	-----	
B.US.SF2	-----	
B.US.WEAU160	-----	
<b>CONSENSUS-C</b>		
C.BR.92BR025	-----S-----	
C.BW.96BW0502	-----T-----	
C.ET.ETH2220	-----P-----	
C.IN.11246	-----P-----	
C.IN.21068	-----N-----	
C.IN.301999	-----A-----	

**Pol Epitope 21-23**

CONSENSUS-B Epitope #	AIFQSSMTK HLA (A11,A3, A*680,A3.1)	CONSENSUS-D D.UG.94UG114 D.ZR.84ZR085 D.ZR.ELI D.ZR.NDK D.ZR.Z2Z6
21	AIFQSSMTK AIFQSSMTK (A33)	-----I
22	AIFQSSMTK (A3.1)	-----
23	AIFQSSMTK (A33)	-----?----
<b>CONSENSUS-A</b>		
A.KE.Q2317	-----	
A.SE.SOSE7253	-----	
A.SE.TZSE8538	-----S-----	
A.SE.UGSE8891	-----I-----	
A.UG.92UG037	-----A-----	
A.UG.U455	S-----	
AE.CF.90CF402	-----	
AE.TH.93TH253	-----	
AE.TH.CM240	-----	
AG.DJ.DJ263	-----A-----	
AG.DJ.DJ264	-----A-----	
AG.ING.IBNG	-----A-----	
AGI.CY.94CY0323	-----C-----	
AGI.GR.97PVCH	-----Y-----	
AGI.GR.97PVMY	-----C-----	
<b>CONSENSUS-B</b>		
B.AU.MBC18	-----R-----	
B.CN.CNRL42	-----C-----	
B.DE.D31	-----	
B.FR.HXB2R	-----	
B.FR.LAI	-----	
B.GA.OYI	-----	
B.GB.CAML	-----	
B.NL.ACH320A	-----C-----	
B.US.JRFL	-----	
B.US.MN	-----	
B.US.RF	-----	
B.US.SF2	-----	
B.US.WEAU160	-----	
<b>CONSENSUS-C</b>		
C.BR.92BR025	-----S-----	
C.BW.96BW0502	-----T-----	
C.ET.ETH2220	-----P-----	
C.IN.11246	-----PQ-----	
C.IN.21068	-----N-----	
C.IN.301999	-----R-----	
	-----A-----	





**Pol Epitope 28**

<b>CONSENSUS-B</b> Epitope 28 (A*0201)	IXQYMDLLYV	D.UG.94UG114 D.ZR.84ZR085 D.ZR.ELI D.ZR.NDK D.ZR.Z2Z6	----- ----- ----- ----- -----
<b>CONSENSUS-A</b>	-----		
A.KE.Q2317	-----		
A.SE.SOSE7253	-----		
A.SE.TZSE8538	-----		
A.SE.UGSE8891	-----		
A.UG.92UG037	-----		
A.UG.U455	-----		
AE.CF.90CF402	-----		
AE.TH.93TH253	-----		
AE.TH.CM240	---K----		
AG.DJ.DJ263	-----		
AG.DJ.DJ264	-----		
AG.NG.IBNG	-----		
AGI.CY.94CY0323	-----		
AGI.GR.97PVCH	-----		
AGI.GR.97PVVY	-----		
<b>CONSENSUS-B</b>	-----		
B.AU.MBCI8	-----		
B.CN.CNRL42	-----		
B.DE.D31	-----		
B.FR.HXB2R	-----		
B.FR.IAI	-----		
B.GA.OYI	-----		
B.GB.CAML	-----		
B.NL.ACH320A	-----		
B.US.JRFL	-----		
B.US.MN	-----		
B.US.RF	-----		
B.US.SF2	-----		
B.US.WEAU160	-----		
<b>CONSENSUS-C</b>	-----		
C.BR.92BR025	-----		
C.BW.96BW0502	-----		
C.ET.ETH2220	-----		
C.IN.11246	-----		
C.IN.21068	-----		
C.IN.301999	-----		

**Pol Epitope 29**

<b>CONSENSUS-B</b> Epitope 29 <b>CONSENSUS-A</b>	DLEIIGQHRICK DLEIIGQHRICK (A3)	D.UG.94UG114 D.ZR.84ZR085 D.ZR.ELI D.ZR.NDK D.ZR.Z2Z6	----- ----- ----- ----- -----
<b>CONSENSUS-A</b>	-----		
A.KE.Q2317	-----		
A.SE.SOSE7253	-----		
A.SE.TZSE8538	-----		
A.SE.UGSE8891	-----		
A.UG.92UG037	-----		
A.UG.U455	-----		
AE.CF.90CF402	-----		
AE.TH.93TH253	-----		
AE.TH.CM240	-----		
AG.DJ.DJ263	---E---A-		
AG.DJ.DJ264	-----		
AG.NG.IBNG	-----		
AGI.CY.94CY0323	-----		
AGI.GR.97PVCH	-----		
AGI.GR.97PVVY	---KA-		
<b>CONSENSUS-B</b>	-----		
B.AU.MBCI8	-----		
B.CN.CNRL42	-----		
B.DE.D31	-----		
B.FR.HXB2R	-----		
B.FR.IAI	-----		
B.GA.OYI	-----		
B.GB.CAML	-----		
B.NL.ACH320A	-----		
B.US.JRFL	-----		
B.US.MN	-----		
B.US.RF	-----		
B.US.SF2	-----		
B.US.WEAU160	-----		
<b>CONSENSUS-C</b>	-----		
C.BR.92BR025	-----		
C.BW.96BW0502	-----		
C.ET.ETH2220	-----		
C.IN.11246	-----		
C.IN.21068	-----		
C.IN.301999	-----		

CTL

**Pol Epitope 30**

<b>CONSENSUS-B</b> Epitope 30 <b>CONSENSUS-A</b>	<b>KIEELRQHL</b> KIEELRQHL (A2)	<b>CONSENSUS-F</b> F.BR.93BR020 F.FI.FIN9363	-----E- -----E- -----E-
A.KE.Q2317	-----a- -----A- -----A-	<b>CONSENSUS-G</b> G.BE.DRCBL G.FI.HH8793-11 G.SE.SE6165	-----E- -----E- -----E- -----E-
A.SE.SOSE7253	-----A- -----A- -----A-	<b>CONSENSUS-H</b> H.BE.VI991 H.BE.VI997 H.CF.90CF056	-----A- -----A- -----A- -----A-
A.SE.TZSE8538	-V---A- -----E- -----A-	<b>CONSENSUS-I</b> I.BE.VI991 I.BE.VI997 I.CF.90CF056	-----A- -----A- -----A- -----A-
A.UG.92UG037	-----A- -----A- -----A-	<b>CONSENSUS-J</b> J.SE.SE91733 J.SE.SE92809	-----E- -----E- -----E-
A.UG.U455	-----A- -----A- -----A-	<b>CONSENSUS-K</b> K.CM.YBF30 K.CM.YBF30	-----A- -----A- -----A-
AE.CF.90CF402	-V-D--A- -----A- -----A-	<b>CONSENSUS-L</b> L.CM.ANT70 L.CM.MVP5180	---K---E- ---K---E- ---K---E-
AE.TH.93TH253	-----A- -----A- -----A-	<b>CONSENSUS-M</b> M.CM.YBF30 M.CM.YBF30	---K---E- ---K---E- ---K---E-
AE.TH.CM240	-----A- -----A- -----A-	<b>CONSENSUS-N</b> N.CM.YBF30 N.CM.YBF30	---K---E- ---K---E- ---K---E-
AG.DJ.DJ263	-----E- -----E- -----E-	<b>CONSENSUS-O</b> O.CM.ANT70 O.CM.MVP5180	---R---L--E- ---R---L--E- ---R---L--E-
AG.DJ.DJ264	-----E- -----E- -----E-	<b>CONSENSUS-P</b> P.CM.YBF30 P.CM.YBF30	---R---L--E- ---R---L--E- ---R---L--E-
AG.NG.IBNG	-----G- -----G- -----G-	<b>CONSENSUS-Q</b> Q.CM.ANT70 Q.CM.MVP5180	---R---L--E- ---R---L--E- ---R---L--E-
AGI.CY.94CY0323	-----E- -----E- -----E-	<b>CONSENSUS-R</b> R.CM.ANT70 R.CM.MVP5180	---R---L--E- ---R---L--E- ---R---L--E-
AGI.GR.97PVCH	-----E- -----E- -----E-	<b>CONSENSUS-S</b> S.CM.ANT70 S.CM.MVP5180	---R---L--E- ---R---L--E- ---R---L--E-
AGI.GR.97PVMY	-----E- -----E- -----E-	<b>CONSENSUS-T</b> T.CM.ANT70 T.CM.MVP5180	---R---L--E- ---R---L--E- ---R---L--E-

**Pol Epitope 31**

<b>CONSENSUS-B</b> Epitope 31 <b>CONSENSUS-A</b>	<b>BEELRQHLLRW</b> BEELRQHLLRW (B44)	<b>CONSENSUS-F</b> F.BR.93BR020 F.FI.FIN9363	-----E--K- -----E--K- -----E--K-
A.KE.Q2317	-----a--s- -----A--S- -----A--S-	<b>CONSENSUS-G</b> G.BE.DRCBL G.FI.HH8793-11 G.SE.SE6165	-----E- -----E- -----E- -----E-
A.SE.SOSE7253	-----A--S- -----A--S- -----A--S-	<b>CONSENSUS-H</b> H.BE.VI991 H.BE.VI997 H.CF.90CF056	-----A- -----A- -----A- -----A-
A.SE.TZSE8538	-----A--S- -----A--S- -----A--S-	<b>CONSENSUS-I</b> I.BE.VI991 I.BE.VI997 I.CF.90CF056	-----A- -----A- -----A- -----A-
A.UG.92UG037	-----E--K- -----E--K- -----E--K-	<b>CONSENSUS-J</b> J.SE.SE91733 J.SE.SE92809	-----E- -----E- -----E-
A.UG.U455	-----A--S- -----A--S- -----A--S-	<b>CONSENSUS-K</b> K.CM.YBF30 K.CM.YBF30	-----A- -----A- -----A-
AE.CF.90CF402	-D--A--S- -----A--S- -----A--S-	<b>CONSENSUS-L</b> L.CM.ANT70 L.CM.MVP5180	---K---E---K- ---K---E---K- ---K---E---K-
AE.TH.93TH253	-----A--S- -----A--S- -----A--S-	<b>CONSENSUS-M</b> M.CM.YBF30 M.CM.YBF30	---K---E---K- ---K---E---K- ---K---E---K-
AE.TH.CM240	-----A--S- -----A--S- -----A--S-	<b>CONSENSUS-N</b> N.CM.YBF30 N.CM.YBF30	---K---E---K- ---K---E---K- ---K---E---K-
AG.DJ.DJ263	-----E--K- -----E--K- -----E--K-	<b>CONSENSUS-O</b> O.CM.ANT70 O.CM.MVP5180	---L--E--YQ- ---L--E--YQ- ---L--E--YQ-
AG.DJ.DJ264	-----E--K- -----E--K- -----E--K-	<b>CONSENSUS-P</b> P.CM.ANT70 P.CM.MVP5180	---L--E--YQ- ---L--E--YQ- ---L--E--YQ-
AG.NG.IBNG	-----G--K- -----G--K- -----G--K-	<b>CONSENSUS-Q</b> Q.CM.ANT70 Q.CM.MVP5180	---L--E--YQ- ---L--E--YQ- ---L--E--YQ-
AGI.CY.94CY0323	-----E- -----E- -----E-	<b>CONSENSUS-R</b> R.CM.ANT70 R.CM.MVP5180	---L--E--YQ- ---L--E--YQ- ---L--E--YQ-
AGI.GR.97PVCH	-----E- -----E- -----E-	<b>CONSENSUS-S</b> S.CM.ANT70 S.CM.MVP5180	---L--E--YQ- ---L--E--YQ- ---L--E--YQ-
AGI.GR.97PVMY	-----E- -----E- -----E-	<b>CONSENSUS-T</b> T.CM.ANT70 T.CM.MVP5180	---L--E--YQ- ---L--E--YQ- ---L--E--YQ-

CTL



**Pol Epitope 34**

<b>CONSENSUS-B</b> Epitope 34 <b>CONSENSUS-A</b>	LVGKLNWASQIT LVGKLNWASQIT (Bw62)	<b>CONSENSUS-F</b> F.BR.93BR020 F.FI.FIN9363	-----? -----x
A.KE.Q2317	-----	<b>CONSENSUS-G</b> G.BE.DRCBL G.FI.HH8793-11 G.SE.SE6165	-----
A.SE.SOSE7253	-----	<b>CONSENSUS-H</b> H.BE.VI991 H.BE.VI997 H.CF.90CF056	-----
A.SE.TZSE8538	-----	<b>CONSENSUS-I</b> I.BE.VI991 I.BE.VI997 I.CF.90CF056	-----
A.SE.UGSE8891	-----	<b>CONSENSUS-J</b> J.SE.SE91733 J.SE.SE92809	-----
A.UG.92UG037	-----	<b>CONSENSUS-K</b> K.CM.YBF30	-----
A.UG.U455	-----	<b>CONSENSUS-L</b> L.CM.ANT70 L.CM.WVP5180	-----
AE.CF.90CF402	-----	<b>CONSENSUS-M</b> M.ANT70 M.WVP5180	-----
AE.TH.93TH253	-----	<b>CONSENSUS-N</b> N.ANT70 N.WVP5180	-----
AE.TH.CM240	-----	<b>CONSENSUS-O</b> O.ANT70 O.WVP5180	-----
AG.DJ.DJ263	-----	<b>CONSENSUS-P</b> P.ANT70 P.WVP5180	-----
AG.DJ.DJ264	-----F	<b>CONSENSUS-Q</b> Q.ANT70 Q.WVP5180	-----
AG.NG.IBNG	-----	<b>CONSENSUS-R</b> R.ANT70 R.WVP5180	-----
AGI.CY.94CY0323	-----	<b>CONSENSUS-S</b> S.ANT70 S.WVP5180	-----
AGI.GR.97PVCH	-----	<b>CONSENSUS-T</b> T.ANT70 T.WVP5180	-----
AGI.GR.97PVMY	-----	<b>CONSENSUS-U</b> U.ANT70 U.WVP5180	-----
<b>CONSENSUS-B</b>	-----	<b>CONSENSUS-V</b> V.ANT70 V.WVP5180	-----
B.AU.MBC18	-----	<b>CONSENSUS-W</b> W.ANT70 W.WVP5180	-----
B.CN.CNRL42	-----	<b>CONSENSUS-X</b> X.ANT70 X.WVP5180	-----
B.DE.D31	-----	<b>CONSENSUS-Y</b> Y.ANT70 Y.WVP5180	-----
B.FR.HXB2R	-----	<b>CONSENSUS-Z</b> Z.ANT70 Z.WVP5180	-----
B.FR.LAI	-----	<b>CONSENSUS-AA</b> AA.ANT70 AA.WVP5180	-----
B.GA.OYI	-----	<b>CONSENSUS-AB</b> AB.ANT70 AB.WVP5180	-----
B.GB.CAML	-----	<b>CONSENSUS-AC</b> AC.ANT70 AC.WVP5180	-----
B.NL.ACH320A	-----	<b>CONSENSUS-AD</b> AD.ANT70 AD.WVP5180	-----
B.US.JRFL	-----	<b>CONSENSUS-AE</b> AE.ANT70 AE.WVP5180	-----
B.US.MN	-----	<b>CONSENSUS-AF</b> AF.ANT70 AF.WVP5180	-----
B.US.RF	-----	<b>CONSENSUS-AG</b> AG.ANT70 AG.WVP5180	-----
B.US.SF2	-----	<b>CONSENSUS-AH</b> AH.ANT70 AH.WVP5180	-----
B.US.WEAU160	-----	<b>CONSENSUS-AI</b> AI.ANT70 AI.WVP5180	-----

**Pol Epitope 35**

<b>CONSENSUS-B</b> Epitope 35 <b>CONSENSUS-A</b>	YAGIKVKQL YAGIKVKQL (B42)	<b>CONSENSUS-F</b> F.BR.93BR020 F.FI.FIN9363	-P-----? -P-----R-
A.KE.Q2317	-----	<b>CONSENSUS-G</b> G.BE.DRCBL G.FI.HH8793-11 G.SE.SE6165	-P-----? -P-----R- -P-----R- -P-----TH-
A.SE.SOSE7253	-----	<b>CONSENSUS-H</b> H.BE.VI991 H.BE.VI997 H.CF.90CF056	-P----- -P----- -P-----R- -PN-----
A.SE.TZSE8538	-V-----	<b>CONSENSUS-I</b> I.BE.VI991 I.BE.VI997 I.CF.90CF056	-P----- -P-----R- -P-----R-
A.SE.UGSE8891	-----	<b>CONSENSUS-J</b> J.SE.SE91733 J.SE.SE92809	-P-----? -P-----I- -P-----
A.UG.92UG037	-----	<b>CONSENSUS-K</b> K.CM.YBF30	-P-----R-
A.UG.U455	-----	<b>CONSENSUS-L</b> L.CM.ANT70 L.CM.WVP5180	-P-----R-? -P-----R- -P-----R- -P-----R-
AE.CF.90CF402	-----R-	<b>CONSENSUS-M</b> M.ANT70 M.WVP5180	-P-----? -P-----I- -P-----R-
AE.TH.93TH253	-----	<b>CONSENSUS-N</b> N.ANT70 N.WVP5180	-P-----R-? -P-----R- -P-----R- -P-----R-
AE.TH.CM240	-----	<b>CONSENSUS-O</b> O.ANT70 O.WVP5180	-P-----R-? -P-----R- -P-----R- -P-----R-
AG.DJ.DJ263	-----	<b>CONSENSUS-P</b> P.ANT70 P.WVP5180	-P-----R-? -P-----R- -P-----R- -P-----R-
AG.DJ.DJ264	F-----	<b>CONSENSUS-Q</b> Q.ANT70 Q.WVP5180	-P-----R-? -P-----R- -P-----R- -P-----R-
AG.NG.IBNG	-----I-	<b>CONSENSUS-R</b> R.ANT70 R.WVP5180	-P-----R-? -P-----R- -P-----R- -P-----R-
AGI.CY.94CY0323	-----	<b>CONSENSUS-S</b> S.ANT70 S.WVP5180	-P-----R-? -P-----R- -P-----R- -P-----R-
AGI.GR.97PVCH	-P-----	<b>CONSENSUS-T</b> T.ANT70 T.WVP5180	-P-----R-? -P-----R- -P-----R- -P-----R-
AGI.GR.97PVMY	-----	<b>CONSENSUS-U</b> U.ANT70 U.WVP5180	-P-----R-? -P-----R- -P-----R- -P-----R-
<b>CONSENSUS-B</b>	-----	<b>CONSENSUS-V</b> V.ANT70 V.WVP5180	-P-----R-? -P-----R- -P-----R- -P-----R-
B.AU.MBC18	-P-----R-	<b>CONSENSUS-W</b> W.ANT70 W.WVP5180	-P-----R-? -P-----R- -P-----R- -P-----R-
B.CN.CNRL42	-----E-	<b>CONSENSUS-X</b> X.ANT70 X.WVP5180	-P-----R-? -P-----R- -P-----R- -P-----R-
B.DE.D31	-----R-	<b>CONSENSUS-Y</b> Y.ANT70 Y.WVP5180	-P-----R-? -P-----R- -P-----R- -P-----R-
B.FR.HXB2R	-P-----R-	<b>CONSENSUS-Z</b> Z.ANT70 Z.WVP5180	-P-----R-? -P-----R- -P-----R- -P-----R-
B.FR.LAI	-P-----R-	<b>CONSENSUS-AA</b> AA.ANT70 AA.WVP5180	-P-----R-? -P-----R- -P-----R- -P-----R-
B.GA.OYI	-----N-	<b>CONSENSUS-AB</b> AB.ANT70 AB.WVP5180	-P-----R-? -P-----R- -P-----R- -P-----R-
B.GB.CAML	-----	<b>CONSENSUS-AC</b> AC.ANT70 AC.WVP5180	-P-----R-? -P-----R- -P-----R- -P-----R-
B.NL.ACH320A	-----RH-	<b>CONSENSUS-AD</b> AD.ANT70 AD.WVP5180	-P-----R-? -P-----R- -P-----R- -P-----R-
B.US.JRFL	-----	<b>CONSENSUS-AE</b> AE.ANT70 AE.WVP5180	-P-----R-? -P-----R- -P-----R- -P-----R-
B.US.MN	-----	<b>CONSENSUS-AF</b> AF.ANT70 AF.WVP5180	-P-----R-? -P-----R- -P-----R- -P-----R-
B.US.RF	-----	<b>CONSENSUS-AG</b> AG.ANT70 AG.WVP5180	-P-----R-? -P-----R- -P-----R- -P-----R-
B.US.SF2	-----	<b>CONSENSUS-AH</b> AH.ANT70 AH.WVP5180	-P-----R-? -P-----R- -P-----R- -P-----R-
B.US.WEAU160	-----	<b>CONSENSUS-AI</b> AI.ANT70 AI.WVP5180	-P-----R-? -P-----R- -P-----R- -P-----R-

CTL







**Pol Epitope 44,45**

<b>CONSENSUS-B</b>	<b>DYKQILTREV</b>	<b>CONSENSUS-D</b>	-----
Epitope #	HLA	D.UG.94UG114	-----
44	DYKQILTEVV (A*6802)	D.ZR.84ZR085	-----
45	DYKQILTEVV (B70)	D.ZR.ELI	-----A
<b>CONSENSUS-A</b>	<b>---?-a-V-</b>	D.ZR.NDK	-----A-V-
A.KE.Q2317	--R-A-V-	D.ZR.Z2Z6	-----
A.SE.SOSE7253	--R-A-V-	<b>CONSENSUS-F</b>	-----
A.SE.TZSE8538	---A-V-	F.BR.93BR020	-----
A.SE.UGSE8891	--R-V-V-	F.PI.FIN9363	-----
A.UG.92UG037	---A-V-	<b>CONSENSUS-G</b>	-----V-
A.UG.U455	-----V-	G.BE.DRCBL	-----V-
<b>CONSENSUS-B</b>	<b>--R-A-V-</b>	G.PI.HH8793-11	-----V-
AE.CF.90CF402	--R--V-	G.SE.SE6165	-----V-
AE.TH.93TH253	--R--V-	<b>CONSENSUS-H</b>	-----
AE.TH.CM240	--R--V-	H.BE.VI991	-----V-
<b>CONSENSUS-C</b>	<b>---A-V-</b>	H.BE.VI997	-----
AG.DJ.DJ263	---A-V-	H.CF.90CF056	-I-----
AG.DJ.DJ264	-----V-	<b>CONSENSUS-J</b>	-----??V-
AG.ING.IBNG	-----V-	J.SE.SE91733	-----SQV-
<b>CONSENSUS-D</b>	<b>---A-V-</b>	J.SE.SE92809	-----A-V-
AGI.CY.94CY0323	---A-V-	N.CM.YBR30	-I---V-V-
AGI.GR.97PVCH	--R--V-	<b>CONSENSUS-O</b>	-----
AGI.GR.97PVMY	--R--V-	O.CM.ANT70	-IR--A-V?
<b>CONSENSUS-E</b>	<b>---A-V-</b>	O.CM.MVP5180	-IR--A-VI
B.AU.MBC18	-----	<b>CONSENSUS-CPZ</b>	??R--A??-
B.CN.CNRL42	-----	CPZGAB	-IR--A---
B.DE.D31	-----	CPZANT	E-R--AGV-
B.FR.HXB2R	-----	<b>CONSENSUS-CPZ</b>	-----
B.FR.LAI	-----	B.AU.MBC18	---A?
B.GA.OYI	-----	B.CN.CNRL42	--AL--I--
B.GB.CAML	-----	B.DE.D31	--AQ-----
B.NL.ACH320A	-----	B.FR.HXB2R	--AL-----
B.US.JRFL	-----	B.FR.LAI	--AM-----
B.US.MN	-----	B.GA.OYI	--A-----
B.US.RF	-----	B.GB.CAML	-VA-----
B.US.SF2	-----	B.NL.ACH320A	-VS-----
B.US.WEAU160	-----	B.US.JRFL	-T-----
<b>CONSENSUS-C</b>	<b>-----</b>	B.US.MN	-TQ-----
C.BR.92BR025	-----	B.US.RF	-A-----
C.BW.96BW0502	-----R-----	B.US.SF2	-AN-----
C.ET.ETH2220	-----AV-----	B.US.WEAU160	-A-----
C.IN.11246	-----	<b>CONSENSUS-C</b>	---A?
C.IN.21068	-----	C.BR.92BR025	--AL--I--
C.IN.301999	-----A-----	C.BW.96BW0502	--AQ-----
		C.ET.ETH2220	--AL-----
		C.IN.11246	--AM-----
		C.IN.21068	--A-----
		C.IN.301999	--AM-----

**Pol Epitope 46**

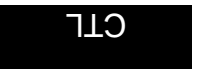
<b>CONSENSUS-B</b>	<b>KI?LESIVIM</b>	<b>CONSENSUS-D</b>	-----
Epitope #	KITTESIVIM	D.UG.94UG114	---aQ-C-----
46	---VVM---	D.ZR.84ZR085	---AI-----
47	---VVM---	D.ZR.ELI	R-S-----
<b>CONSENSUS-A</b>	<b>---VVM---</b>	D.ZR.NDK	---A-----
A.KE.Q2317	---VVM---	D.ZR.Z2Z6	---S-----
A.SE.SOSE7253	---VVM---	<b>CONSENSUS-F</b>	---L-----
A.SE.TZSE8538	---VVM---	F.BR.93BR020	---SL-----
A.SE.UGSE8891	---VVM---	F.PI.FIN9363	---AL-----
A.UG.92UG037	---VS-----	<b>CONSENSUS-G</b>	---A-----
A.UG.U455	---VA-----	G.BE.DRCBL	---A-G-I--
<b>CONSENSUS-B</b>	<b>---A-----</b>	G.PI.HH8793-11	---A-----
AE.CF.90CF402	---A-----	G.SE.SE6165	---A-----
AE.TH.93TH253	---VA-----	<b>CONSENSUS-H</b>	---a-----
AE.TH.CM240	---VA-----	H.BE.VI991	---A-----
<b>CONSENSUS-C</b>	<b>---VA-----</b>	H.BE.VI997	---A-----
AG.DJ.DJ263	---VA-----	H.CF.90CF056	---S-----
AG.DJ.DJ264	---VA-----	<b>CONSENSUS-J</b>	---AL-A-----
AG.ING.IBNG	---VAM-----	J.SE.SE91733	---AL-A-----
<b>CONSENSUS-D</b>	<b>---AM-C-----</b>	J.SE.SE92809	---AL-A-----
AGI.CY.94CY0323	---AM-C-----	N.CM.YBR30	---VA-----
AGI.GR.97PVCH	---AM-C-----	<b>CONSENSUS-O</b>	---VSQ-?-?-
AGI.GR.97PVMY	---AM-C-----	O.CM.ANT70	---VSQ--I--
<b>CONSENSUS-E</b>	<b>---A-----</b>	O.CM.MVP5180	---VSQ-A---
B.AU.MBC18	---A-----	<b>CONSENSUS-CPZ</b>	---?------
B.CN.CNRL42	---A-----	CPZGAB	---A-----
B.DE.D31	---T-----	CPZANT	---GL-----
B.FR.HXB2R	---T-----	<b>CONSENSUS-CPZ</b>	-----
B.FR.LAI	---T-----	B.AU.MBC18	---A-----
B.GA.OYI	---TQ-----	B.CN.CNRL42	---VSQ-?-?-
B.GB.CAML	---A-----	B.DE.D31	---VSQ--I--
B.NL.ACH320A	---AN-----	B.FR.HXB2R	---VSQ-A---
B.US.JRFL	---A-----	B.FR.LAI	---?------
B.US.MN	---A-----	B.GA.OYI	---A-----
B.US.RF	---VA-----	B.GB.CAML	---A-----
B.US.SF2	---VS-----	B.NL.ACH320A	---A-----
B.US.WEAU160	---T-----	B.US.JRFL	---GL-----
<b>CONSENSUS-C</b>	<b>---A?</b>	B.US.MN	---A-----
C.BR.92BR025	--AL--I--	B.US.RF	---A-----
C.BW.96BW0502	--AQ-----	B.US.SF2	---A-----
C.ET.ETH2220	--AL-----	B.US.WEAU160	---A-----
C.IN.11246	--AM-----	<b>CONSENSUS-C</b>	---A?
C.IN.21068	--A-----	C.BR.92BR025	--AL--I--
C.IN.301999	--AM-----	C.BW.96BW0502	--AQ-----
		C.ET.ETH2220	--AL-----
		C.IN.11246	--AM-----
		C.IN.21068	--A-----
		C.IN.301999	--AM-----

**Pol Epitope 47**

<b>CONSENSUS-B</b> Epitope 47 <b>CONSENSUS-A</b>	<b>PIQKETweaM</b> PIQKETWETW (A32)	<b>CONSENSUS-D</b> D.UG.94UG114 D.ZR.84ZR085 D.ZR.ELI D.ZR.NDK D.ZR.Z2Z6	-----T- -----T- -----T- -----T- -----T- -----T-
A.KE.Q2317 A.SE.SOSE7253 A.SE.TZSE8538 A.SE.UGSE8891 A.UG.92UG037 A.UG.U455	-----DT- -----T- -----T- -----T- -----T- -----T-	<b>CONSENSUS-F</b> F.BR.93BR020 F.FI.FIN9363	---L---DT- ---L---DT- ---L---DT- ---L---DT- ---L---DT- ---L---DT-
AG.CF.90CF402 AE.TH.93TH253 AE.TH.CM240	---R---T- ---R---T- ---R---T-	<b>CONSENSUS-G</b> G.BE.DRCBL G.FI.HH8793-11 G.SE.SE6165	---K---V- ---R---V- ---R---V-
AG.DJ.DJ263 AG.DJ.DJ264 AG.NG.IBNG	---R---T- ---R---T- ---R---T-	<b>CONSENSUS-H</b> H.BE.VI991 H.BE.VI997 H.CF.90CF056	-----T- -----T- -----T- -----T-
AGI.CY.94CY0323 AGI.GR.97PVCH AGI.GR.97PVMY	-----DT- -----DT- -----DT-	<b>CONSENSUS-J</b> J.SE.SE91733 J.SE.SE92809	---?----T- ---?----T- ---?----T-
<b>CONSENSUS-B</b> B.AU.MBC18 B.CN.CNRL42 B.DE.D31 B.FR.HXB2R B.FR.IAI B.GA.OYI B.GB.CAM1 B.NL.ACH320A B.US.JRFL B.US.MN B.US.RF B.US.SF2 B.US.WEAU160	-----D- -----D- -----T- -----T- -----T- -----T- -----D- -----D- -----T- -----T- -----T- -----T- -----T- -----T-	N.CM.YBF30 <b>CONSENSUS-O</b> O.CM.ANT70 O.CM.MVP5180	-V---V- -VTR---T- -VTR---T- -VTR---T- -VTR---T- -VTR---T- -VTR---T- -VTR---T- -VTR---T- -VTR---T- -VTR---T- -VTR---T- -VTR---T- -VTR---T-
<b>CONSENSUS-C</b> C.BR.92BR025 C.BW.96BW0502 C.ET.ETH2220 C.IN.11246 C.IN.21068 C.IN.301999	-----?- -----T- -----T- -----T- -----T- -----T-	<b>CONSENSUS-CPZ</b> CPZGAB CPZANT	-???-?-?- -V---S- --TR--D-

**Pol Epitope 48**

<b>CONSENSUS-B</b> Epitope 48 <b>CONSENSUS-A</b>	<b>TweaMWTetv</b> TWEtWtETeW (B44)	<b>CONSENSUS-D</b> D.UG.94UG114 D.ZR.84ZR085 D.ZR.ELI D.ZR.NDK D.ZR.Z2Z6	---T---?- ---T---ID- ---T---A- ---T---I- ---T---V- ---T---V-
A.KE.Q2317 A.SE.SOSE7253 A.SE.TZSE8538 A.SE.UGSE8891 A.UG.92UG037 A.UG.U455	---DT---MD- ---T---MD- ---T---M- ---T---MD- ---T---MD- ---T---MD-	<b>CONSENSUS-F</b> F.BR.93BR020 F.FI.FIN9363	---DT--- ---DT--- ---DT--- ---DT--- ---DT--- ---DT---
AG.CF.90CF402 AE.TH.93TH253 AE.TH.CM240	---T---M- ---T---M- ---T---M-	<b>CONSENSUS-G</b> G.BE.DRCBL G.FI.HH8793-11 G.SE.SE6165	---V--- ---V--- ---V--- ---V--- ---V---
AG.DJ.DJ263 AG.DJ.DJ264 AG.NG.IBNG	---M--- ---M--- ---M---	<b>CONSENSUS-H</b> H.BE.VI991 H.BE.VI997 H.CF.90CF056	---T---h- ---T---h- ---T---h- ---T---h-
AGI.CY.94CY0323 AGI.GR.97PVCH AGI.GR.97PVMY	---DT--- ---DT--- ---DT---M-	<b>CONSENSUS-J</b> J.SE.SE91733 J.SE.SE92809	---T---D- ---T---D- ---T---D-
<b>CONSENSUS-B</b> B.AU.MBC18 B.CN.CNRL42 B.DE.D31 B.FR.HXB2R B.FR.IAI B.GA.OYI B.GB.CAM1 B.NL.ACH320A B.US.JRFL B.US.MN B.US.RF B.US.SF2 B.US.WEAU160	-----D- -----D- -----T- -----T- -----T- -----T- -----D- -----D- -----T- -----T- -----T- -----T- -----M- -----T-	N.CM.YBF30 <b>CONSENSUS-O</b> O.CM.ANT70 O.CM.MVP5180	V-----DH- ---T---A?- ---T---AD- ---T---A- ---T---A- ---T---A- ---T---A- ---T---A- ---T---A- ---T---A- ---T---A- ---T---A- ---T---A- ---T---A- ---T---A-
<b>CONSENSUS-C</b> C.BR.92BR025 C.BW.96BW0502 C.ET.ETH2220 C.IN.11246 C.IN.21068 C.IN.301999	-----?- -----D- -----D- -----D- -----D- -----D-	<b>CONSENSUS-CPZ</b> CPZGAB CPZANT	---?----?- ---S---A- ---D---SD-







**Pol Epitope 53-55**

<b>CONSENSUS-B</b> Epitope #	<b>IYGAETFFVVDGAAN</b>	<b>CONSENSUS-D</b> D.UG.94UG114 D.ZR.84ZR085 D.ZR.ELI D.ZR.NDK D.ZR.Z2Z6	<b>-I-----</b>
53	IYGAETFFVVDGAAS GAETFFVVDGA	(A*6802) (B45)	-I-----
54	AETFFVVDGAAN (A28)	HLA	-I-----
<b>CONSENSUS-A</b>	<b>-A-----</b>	<b>CONSENSUS-F</b> F.BR.93BR020 F.FI.FIN9363	<b>-P-----Y-----</b>
A.KE.Q2317	-A-----		-P-----Y-----
A.SE.SOSE7253	-A-----		-P-----Y-----
A.SE.TZSE8538	-A-----		-P-----Y-----
A.SE.UGSE8891	-A-----		-P-----Y-----
A.UG.92UG037	-A-----		-P-----Y-----
A.UG.U455	-A-----		-P-----Y-----
AE.CF.90CF402	-M-----S	<b>CONSENSUS-H</b> H.BE.VI991 H.BE.VI997 H.CF.90CF056	<b>-a-----Y-----</b>
AE.TH.93TH253	-----S		-E-----Y-----
AE.TH.CM240	-----S		-A-----Y-----
AG.DJ.DJ263	-----S		-A-----Y-----
AG.DJ.DJ264	-----S		-A-----Y-----
AG.NG.IBNG	-----S		-A-----Y-----
AGI.CY.94CY0323	-A-----	<b>CONSENSUS-J</b> J.SE.SE91733 J.SE.SE92809	<b>-M-----S</b>
AGI.GR.97PVCH	-A-----		-M-----S
AGI.GR.97PVMY	-A-----S		-M-----S
<b>CONSENSUS-B</b>	<b>-----S</b>	<b>CONSENSUS-O</b> O.CM.ANT70 O.CM.MVP5180	<b>-?-----?</b>
B.AU.MBC18	-----T		-M-----Y-----
B.CN.CNRL42	-----T		-M-----Y-----
B.DE.D31	-----T		-M-----Y-----
B.FR.HXB2R	-----T		-M-----Y-----
B.FR.LAI	-----T		-M-----Y-----
B.GA.OYI	-----T		-M-----Y-----
B.GB.CAM1	-----T		-M-----Y-----
B.NL.ACH320A	-----T		-M-----Y-----
B.US.JRFL	-----T		-M-----Y-----
B.US.MN	-----T		-M-----Y-----
B.US.RF	-----T		-M-----Y-----
B.US.SF2	-----T		-M-----Y-----
B.US.WEAU160	-----T		-M-----Y-----
<b>CONSENSUS-C</b>	<b>-----T</b>	<b>CONSENSUS-CPZ</b> CPZGAB CPZANT	<b>-P???-?</b>
C.BR.92BR025	-----T		-PTTD-Y-----
C.BW.96BW0502	-----T		-PE-----
C.ET.FTH2220	-----T		-PE-----
C.IN.11246	-----T		-PE-----
C.IN.21068	-----T		-PE-----
C.IN.301999	-----T		-PE-----

**Pol Epitope 56**

<b>CONSENSUS-B</b> Epitope 56	<b>ETFFVVDGAANR</b>	<b>CONSENSUS-F</b> F.BR.93BR020 F.FI.FIN9363	<b>-----S</b>
<b>CONSENSUS-A</b>	<b>ETFFVVDGAANR (A26)</b>		-----S
A.KE.Q2317	-----		-----Y-----
A.SE.SOSE7253	-----		-----Y-----
A.SE.TZSE8538	-----		-----Y-----
A.SE.UGSE8891	-----		-----Y-----
A.UG.92UG037	-----		-----Y-----
A.UG.U455	-----		-----Y-----
AE.CF.90CF402	-----S	<b>CONSENSUS-H</b> H.BE.VI991 H.BE.VI997 H.CF.90CF056	<b>-Y-----</b>
AE.TH.93TH253	-----S		-Y-----
AE.TH.CM240	-----S		-Y-----
AG.DJ.DJ263	-----S		-Y-----
AG.DJ.DJ264	-----S		-Y-----
AG.NG.IBNG	-----S		-Y-----
AGI.CY.94CY0323	-----S	<b>CONSENSUS-J</b> J.SE.SE91733 J.SE.SE92809	<b>-----S</b>
AGI.GR.97PVCH	-----S		-----S
AGI.GR.97PVMY	-----S		-----S
<b>CONSENSUS-B</b>	<b>-----S</b>	<b>CONSENSUS-O</b> O.CM.ANT70 O.CM.MVP5180	<b>-?-----</b>
B.AU.MBC18	-----		-Y-----
B.CN.CNRL42	-----		-Y-----
B.DE.D31	-----		-Y-----
B.FR.HXB2R	-----		-Y-----
B.FR.LAI	-----		-Y-----
B.GA.OYI	-----		-Y-----
B.GB.CAM1	-----		-Y-----
B.NL.ACH320A	-----		-Y-----
B.US.JRFL	-----		-Y-----
B.US.MN	-----		-Y-----
B.US.RF	-----		-Y-----
B.US.SF2	-----		-Y-----
B.US.WEAU160	-----		-Y-----
<b>CONSENSUS-C</b>	<b>-----</b>	<b>CONSENSUS-CPZ</b> CPZGAB CPZANT	<b>?-?</b>
C.BR.92BR025	-----		D-Y-----
C.BW.96BW0502	-----		D-Y-----
C.ET.FTH2220	-----		D-Y-----
C.IN.11246	-----		D-Y-----
C.IN.21068	-----		D-Y-----
C.IN.301999	-----		D-Y-----
<b>CONSENSUS-D</b>	<b>-----</b>		D-Y-----
D.UG.94UG114	-----		D-Y-----
D.ZR.84ZR085	-----		D-Y-----
D.ZR.ELI	-----		D-Y-----
D.ZR.NDK	-----		D-Y-----
D.ZR.Z2Z6	-----		D-Y-----









**Pol Epitope 65,66**

<b>CONSENSUS-B</b>	<b>LIMKGEQAV</b>	<b>CONSENSUS-D</b>	-----
Epitope #	HLA	D.UG.94UG114	-----
65	LIMKGEQAV (A2)	D.ZR.84ZR085	-----
	LIMKGEQAV (A*0201)	D.ZR.ELI	-----
		D.ZR.NDK	-----
		D.ZR.Z2Z6	-----
<b>CONSENSUS-A</b>	-----	<b>CONSENSUS-F</b>	-----
A.KE.Q2317	-F-----	F.BR.93BR020	-----
A.SE.SOSE7253	-----	F.FI.FIN9363	-----
A.SE.TZSE8538	-----	<b>CONSENSUS-G</b>	-----
A.SE.UGSE8891	-----	G.BE.DRCBL	-----
A.UG.92UG037	-----	G.FI.HH8793-11	-----
A.UG.U455	-----	G.SE.SE6165	-----
AE.CF.90CF402	-----	<b>CONSENSUS-H</b>	-----
AE.TH.93TH253	-----	H.BE.VI991	-----
AE.TH.CM240	-----	H.BE.VI997	-----
AG.DJ.DJ263	-----	H.CF.90CF056	-----
AG.DJ.DJ264	-----	<b>CONSENSUS-J</b>	-----
AG.NG.IBNG	-----	J.SE.SE91733	-----
AGI.CY.94CY0323	-----	J.SE.SE92809	-----
AGI.GR.97PVCH	-----	N.CM.YBF30	-----
AGI.GR.97PVMY	-----	<b>CONSENSUS-O</b>	-----
	-----	O.CM.ANTT70	-----
<b>CONSENSUS-B</b>	-----	O.CM.MVPS180	-----
B.AU.MBC18	-----	<b>CONSENSUS-CPZ</b>	-----
B.CN.CNRL42	-----	CPZGAB	-----
B.DE.D31	-----	CPZANT	-----
B.FR.HXB2R	-----		
B.FR.LAI	-----		
B.GA.OXI	-----		
B.GB.CAM1	-----		
B.NL.ACH320A	-----		
B.US.JRFL	-----		
B.US.MN	-----		
B.US.RF	-----		
B.US.SF2	-----		
B.US.WEAU160	-----		
<b>CONSENSUS-C</b>	-----		
C.BR.92BR025	-----		
C.BW.96BW0502	-----		
C.ET.ETH2220	-----		
C.IN.11246	-----		
C.IN.21068	-----		
C.IN.301999	-----		

**Rev Epitope 1**

<b>CONSENSUS-B</b>	<b>is?PILSty</b>	<b>CONSENSUS-D</b>	-----
Epitope 1	L-ERLSTY (A1)	C.IN.21068	--ER----F
<b>CONSENSUS-A</b>	<b>1-er----</b>	C.IN.301904	L-ER----AC
A.KE.Q23-CXC-CG	-----	C.IN.301905	--ER----C
A.SE.SOSE7253	-----	C.IN.301999	L-ER----C
A.SE.TZSE8538	-----	C.SO.SM145A	--ER----C
A.SE.UGSE6594	-----	C.UG.UG268A2	-----C
A.SE.UGSE7535	-----	<b>CONSENSUS-F</b>	-----
A.SE.UGSE8891	-----	F.BR.93BR0201	--ER----SC
A.UA.AF082486	-----	F.BR.B2126A	--DR----SC
A.UG.92UG037	-----	F.BR.B2163A	L-ER----SC
A.UG.U455	-----	F.FN.FIN6393	--RR----SC
A.UG.UG273A	-----	<b>CONSENSUS-G</b>	-----
A.UG.UG275A	-----	G.BE.DRCBL	--ER----C
AE.CF.90CF402	-----	G.FI.HH8793	--ER----SC
AE.TH.93TH253	-----	G.SE.SE6165	--ER--TA-
AE.TH.CM240	-----	<b>CONSENSUS-H</b>	-----
AG.DJ.DJ263	-----	H.BE.VI991	--ER--t?C
AG.DJ.DJ264	-----	H.BE.VI997	--GERV-A-C
AG.NG.IBNG	-----	H.CF.90CF056	--ER--TDC
AGI.CY.94CY0323	-----	<b>CONSENSUS-I</b>	-----
AGI.GR.97PVCH	-----	I.BE.VI991	--ER--TSC
AGI.GR.97PVMY	-----	<b>CONSENSUS-J</b>	-----
	-----	J.SE.SE9173	--ER--?SC
<b>CONSENSUS-B</b>	-----	J.SE.SE92809	--ER--?SC
B.AU.MBC18	-----	N.CM.YBF30	--ER--SC
B.CN.RL42	-----	<b>CONSENSUS-O</b>	-----
B.DE.D31	-----	O.CM.ANTT70C	<b>LA-R?-A-V</b>
B.DE.HAN	-----	O.CM.MVPS180	LAARV-A-V
B.FR.HXB2	-----	<b>CONSENSUS-CPZ</b>	LATR--A-V
B.FR.LAI	-----	CPZGAB	??-RV--?-?
B.GA.OXI	-----	CPZANT	--GRV-A--
B.GB.CAM1	-----		LAARV-R-L
B.NL.ACH320A	-----		
B.SP.89SP061	-----		
B.US.JRFL	-----		
B.US.MN	-----		
B.US.RF	-----		
B.US.SF2	-----		
B.US.WEAU160	-----		
<b>CONSENSUS-C</b>	-----		
C.BR.92BR025	-----		
C.BW.96BW0502	-----		
C.DJ.DJ259A	-----		
C.DJ.DJ373A	-----		
C.ET.ETH2220	-----		
C.IN.11246	-----		