

Supplementary Table 1. Comparison of conserved T cell exposed motifs across the human coronaviruses

Sars-COV-2 Position	T cell exposed motif	peptide	229E	NL63	HKU1	OC43	MERS	SARS-COV1	SARS-COV2	Pocket positions
MHC I – T cell exposed motifs ~~~4,5,6,7,8~										
67	~~~QGVPI~	SDGQGVPIA			+					SDG~~~~~A
		VEGQGVPIA				+				VEG~~~~~A
		PRGQGVPIN						+	+	PRG~~~~~N
106	~~~YFYLL~	PRWYFYLLG			+	+		+	+	PRW~~~~~G
107	~~~FYLLG~	KLHFYLLGT	+	+						KLH~~~~~T
		RWYFYLLGT			+	+		+	+	RWY~~~~~T
108	~~~YYLGT~	LHFYLLGTG	+							LHF~~~~~G
		VHFYLLGTG		+						VHF~~~~~G
		WYFYLLGTG			+	+		+	+	WYF~~~~~G
109	~~~YLGTG~	HFYLLGTGP	+	+						HFY~~~~~P
		YFYLLGTGP			+	+		+	+	YFY~~~~~P
110	~~~LGTGP~	FYLLGTGPH	+	+		+				FYY~~~~~H
		FYLLGTGPY			+					FYY~~~~~Y
		FYLLGTGPE						+	+	FYY~~~~~E

254	~~~KPRQK~	ILTKPRQKR			+					ILT~~~~R
		ILNKPRQKR				+				ILN~~~~R
		ASKKPRQKR						+	+	ASK~~~~R
255	~~~PRQKR~	LTKPRQKRT			+					LTK~~~~T
		LNKPRQKRS				+				LNK~~~~S
		SKKPRQKRT						+	+	SKK~~~~T
MHC II – T cell exposed motifs ~2,3~ 5~7,8~										
102	PR~Y~YY	KQLLPRWYFYLLGTG			+					KQLL~~W~F~~LGTG
		RQLLPRWYFYLLGTG				+				RQLL~~W~F~~LGTG
		KQLAPRWYFYLTGTG					+			KQLA~~W~F~~TGTG
		KELSPRWYFYLLGTG						+		KELS~~W~F~~LGTG
		KDLSPRWYFYLLGTG							+	KDLS~~W~F~~LGTG
105	YF~Y~GT	LPRWYFYLLGTGPYA			+					LPRW~~Y~L~~GPYA
		LPRWYFYLLGTGPHA				+				LPRW~~Y~L~~GPHA
		APRWYFYLTGTGPEA					+			APRW~~Y~T~~GPEA
		SPRWYFYLLGTGPEA						+	+	SPRW~~Y~L~~GPEA
106	FY~L~TG	PKLHFYLLGTGPHKD	+							PKLH~~Y~G~~PHKD
		PKVHFYLLGTGPHKD		+						PKVH~~Y~G~~PHKD
		PRWYFYLLGTGPYAN			+					PRWY~~Y~G~~PYAN
		PRWYFYLLGTGPHAK				+				PRWY~~Y~G~~PHAK

		PRWYFYLLGTGPEAG						+		PRWY~~Y~G~~PEAG
		PRWYFYLLGTGPEAS							+	PRWY~~Y~G~~PEAS
107	YY~G~GP	KLHFYLLGTGPHKDA	+							KLHF~~L~T~~HKDA
		KVHFYLLGTGPHKDL		+						KVHF~~L~T~~HKDL
		RWYFYLLGTGPYANA			+					RWYF~~L~T~~YANA
		RWYFYLLGTGPHAKD				+				RWYF~~L~T~~HAKD
		RWYFYLLGTGPEAAL					+			RWYF~~T~T~~EAAL
		RWYFYLLGTGPEAGL						+		RWYF~~L~T~~EAGL
		RWYFYLLGTGPEASL							+	RWYF~~L~T~~EASL
MHC II – T cell exposed motifs -1~~,3~ 5~7,8~										
64	F~~G~G~PI	FKFSDGQGVPIAFGV			+					FK~SD~Q~V~AFGV
		FEFVEGQGVPIAPGV								FE~VE~Q~V~APGV
		LRFPRGQGVPIINTNS								LR~PR~Q~V~NTNS
		LKFPRGQGVPIINTNS								LK~PR~Q~V~NTNS
104	P~~Y~Y~LG	LLPRWYFYLLGTGPY			+					LL~RW~F~Y~TGPY
		LLPRWYFYLLGTGPH								LL~RW~F~Y~TGPH
		LSPRWYFYLLGTGPE								LS~RW~F~Y~TGPE
106	W~~Y~L~TG	PRWYFYLLGTGPYAN			+					PR~YF~Y~G~~PYAN
		PRWYFYLLGTGPHAK								PR~YF~Y~G~~PHAK
		PRWYFYLLGTGPEAS								PR~YF~Y~G~~PEAS

