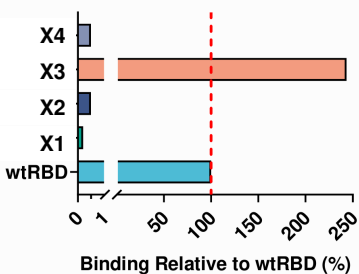


a. RBD mutations in predicted mutants

Sequence Name		323	367	417	452	478	484	485	487	501	519	522	525
WT		T	V	K	L	T	E	G	N	N	H	A	C
Alpha var (B.1.1.7)										Y			
Beta var (B.1.351)				N		K				Y			
Gamma var (P.1)				T		K				Y			
Delta var (B.1.617.2)					R	K							
X25	QPK73836.1	I	F						I				
X24	QJW69797.1	I						R		Y			
X23	QPG84811.1								I	Y		T	
X22	QOU91202.1	I						S	I		Q	V	W
X21	QOU92162.1	I								Y	Q	S	W
X20	QJW69785.1										E	S	
X19	QOJ87394.1	K						R				V	W
X18	QOS50547.1	I						R		T			W
X17	QJW69905.1		F									Q	
X16	QOP79545.1	V						R	I	Q		V	
X15	QPF60554.1							S		Q			W
X14	QOP79592.1							R		T		V	
X13	QPN97393.1	R	F						I	Y	N		
X12	QOS50642.1	I	F					R	I	Y	Q		W
X11	QPK68488.1							S		Y		T	
X10	QPK75749.1								I	Y			W
X9	QOU89474.1							S	I	Y			
X8	QPF65137.1							R				T	
X7	QNQ32139.1	I						R	I	Y			
X6	QOU95354.1							R	H	Y	Q		
X5	QPF67033.1							S	I	Y	Q		
X4	QJW69401.1	I	F					R	I	Y	A		
X3	QOU95810.1	I	F					R		Y			
X2	QOU88610.1	I						S		Q	Y	T	
X1	QOW85029.1	I						S	H	Y	K	T	W

b. Relative Binding Affinity



c. Antibody Neutralization

