

Worldwide Sequence Variant and Non-synonymous Amino Acid Substitution Signature in SARS-COV-2 Structural Proteins

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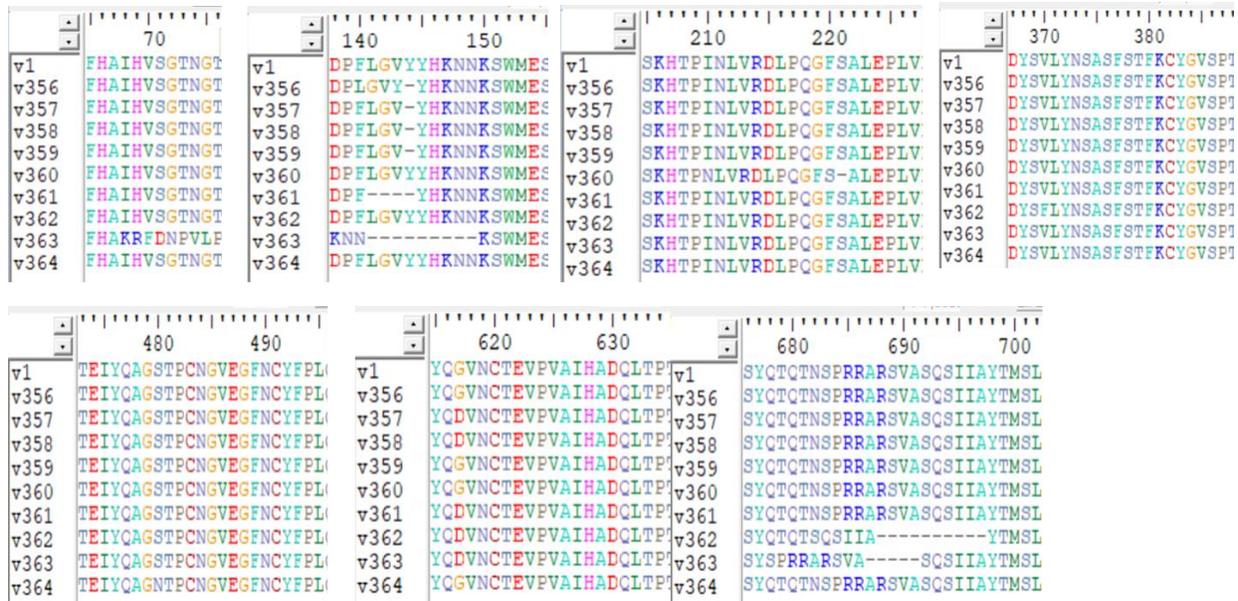


Figure S1: Spike (S) protein alignment comparison. The variant v1 (reference) is compared with other 9 variants (v356-v364), and the several alignment positions are highlighted showing either amino acid substitution or deletion of some amino acid residues.

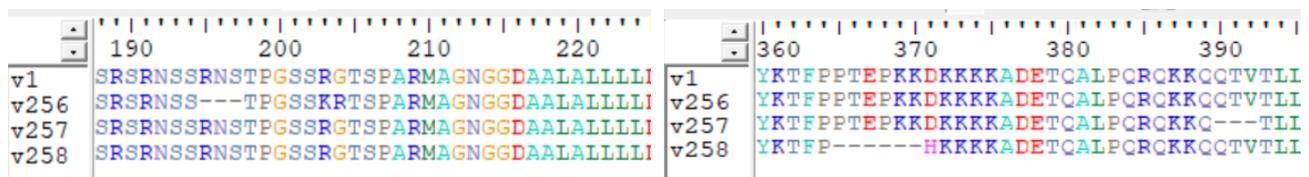


Figure S2: Nucleocapsid (N) protein alignment comparison. The variant v1 (reference) is compared with other 3 variants (v256-v258), and the several alignment positions are highlighted showing deletion of some amino acid residues.

Table S1. The table showing position specific amino acid substitution (AA sub.) count. Observed substitution frequency (>= 3) in any associated variants and distinct substitution type in two structural protein (Spike-S, Nucleocapsid -N)

Protein	Position	Substitution	Obs. Freq.	Distinct substitution type	Protein	Position	Substitution	Obs. Freq.	Distinct substitution type
N	203	R->K M S G	36	4	S	49	H->Y	4	1
N	204	G->R	31	1	S	50	S->L	4	1
N	194	S->L	20	1	S	95	T->I	4	1
N	13	P->L T	7	2	S	138	D->H	4	1
N	208	A->G	7	1	S	220	F->L	4	1
N	144	D->Y H	5	2	S	367	V->F	4	1
N	348	D->Y H	5	2	S	570	A->V S	4	2
N	6	P->L T	4	2	S	622	V->A F I	4	3
N	22	D->G Y N	4	3	S	682	R->Q W	4	2
N	35	A->S T V	4	3	S	1078	A->S V	4	2
N	185	R->C L	4	2	S	1124	G->V	4	1
N	205	T->I	4	1	S	1162	P->L S	4	2
N	209	R->I K T	4	3	S	1263	P->L	4	1
N	232	S->R I T	4	3	S	12	S->F C	3	2
N	383	P->S L	4	2	S	25	P->S L	3	2
N	119	A->V S	3	2	S	28	Y->H N	3	2
N	152	A->S	3	1	S	98	S->F	3	1
N	156	A->S	3	1	S	148	N->S Y	3	2
N	180	S->I G T	3	3	S	153	M->I	3	1
N	191	R->H L	3	2	S	221	S->L	3	1
N	193	S->I N	3	2	S	258	W->L	3	1
N	197	S->L	3	1	S	262	A->T S	3	2
N	202	S->N	3	1	S	314	Q->K L R	3	3
N	238	G->C	3	1	S	483	V->A F	3	2
N	377	D->G Y	3	2	S	554	E->D	3	1
N	386	Q->H K	3	2	S	572	T->I	3	1
S	614	G->D	107	1	S	684	A->T S V	3	3
S	5	L->F	9	1	S	704	S->L	3	1
S	845	A->S D V	7	3	S	812	P->S T	3	2
S	54	L->F	6	1	S	838	G->D S	3	2
S	583	E->D	6	1	S	859	T->I	3	1
S	675	Q->H R K	5	3	S	939	S->F Y	3	2
S	677	Q->H R	5	2	S	1122	V->L	3	1
S	791	T->I	5	1	S	1250	C->F Y	3	2
S	22	T->I N A	4	3	S	1260	D->N H	3	2
S	29	T->I	4	1					