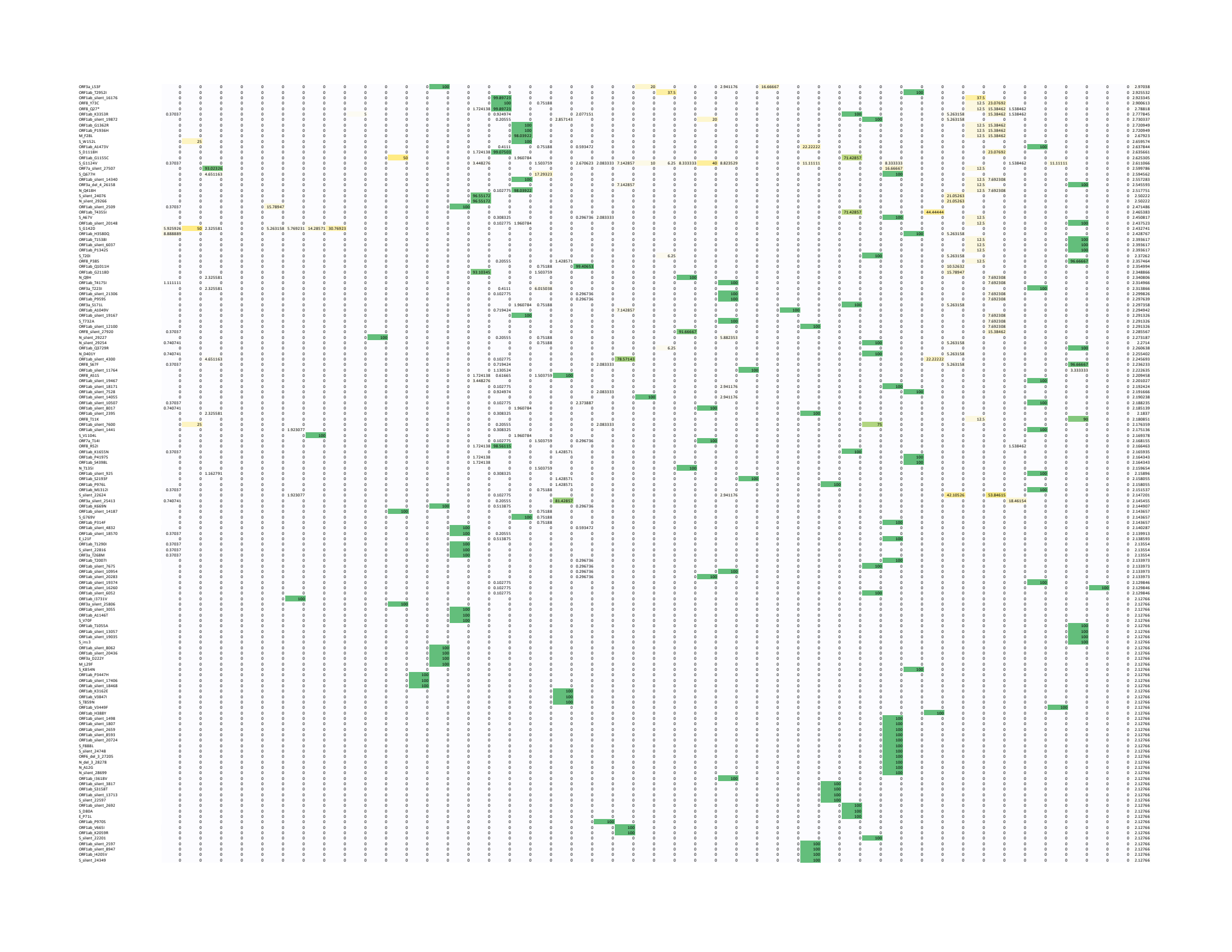
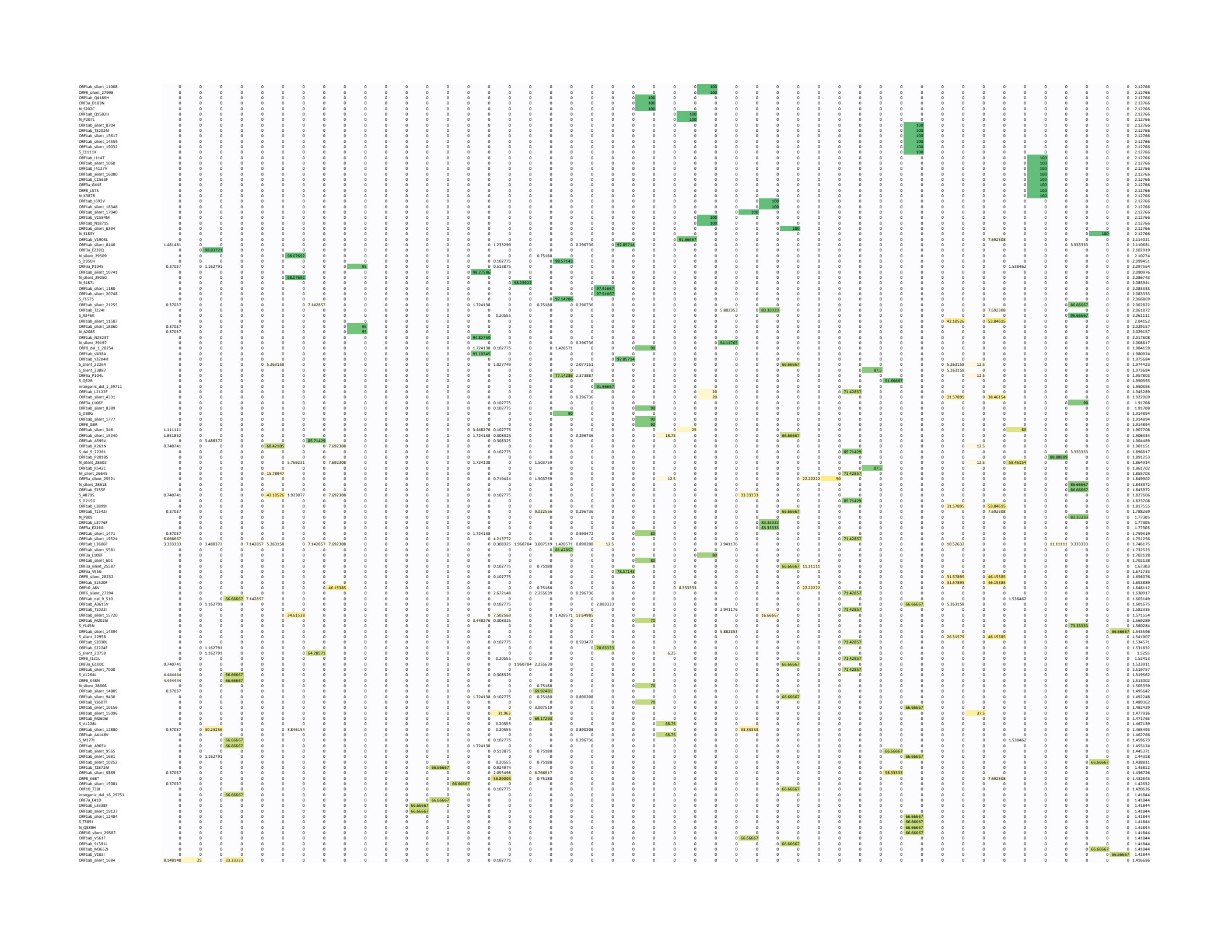
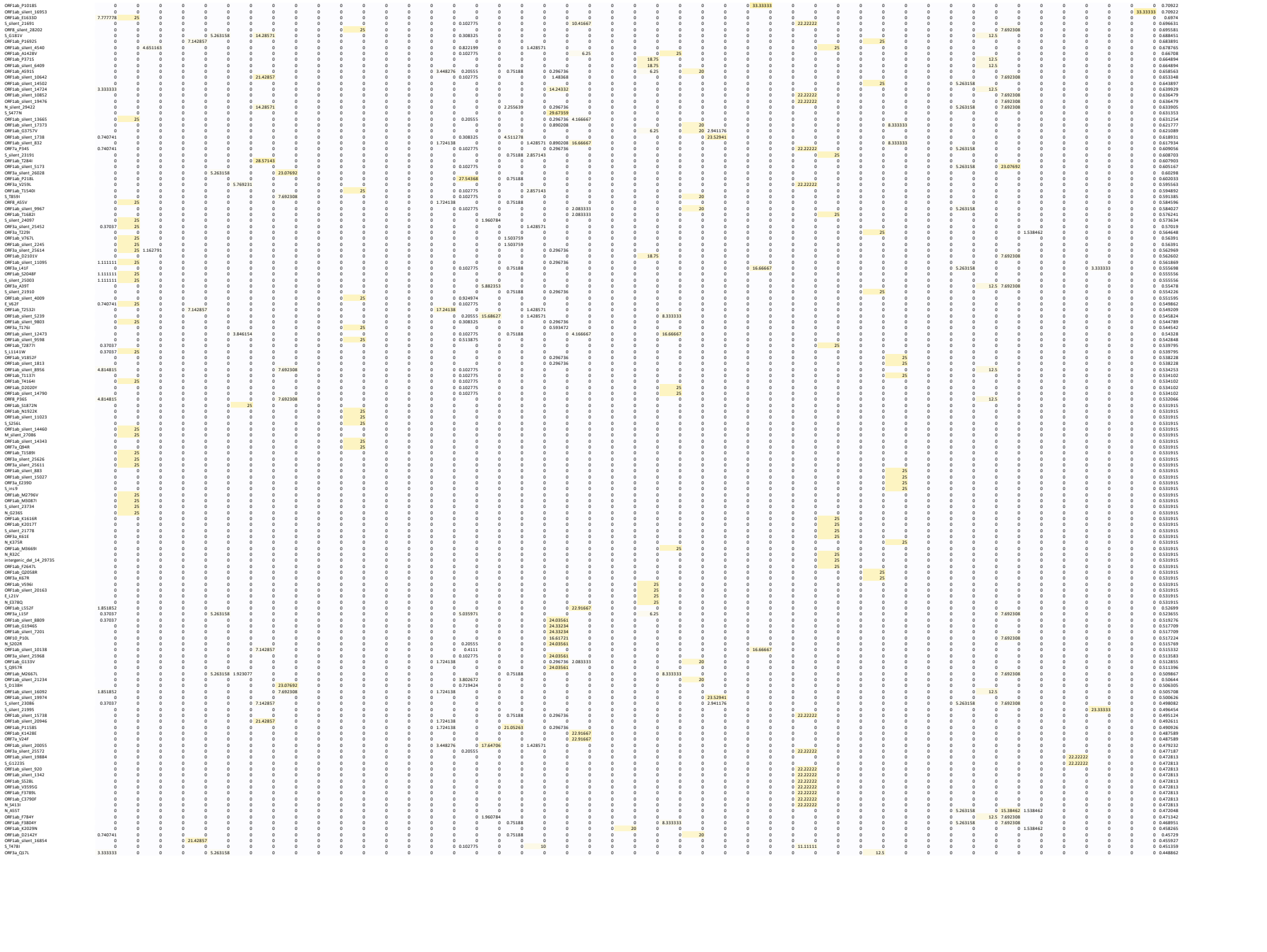
Table S5

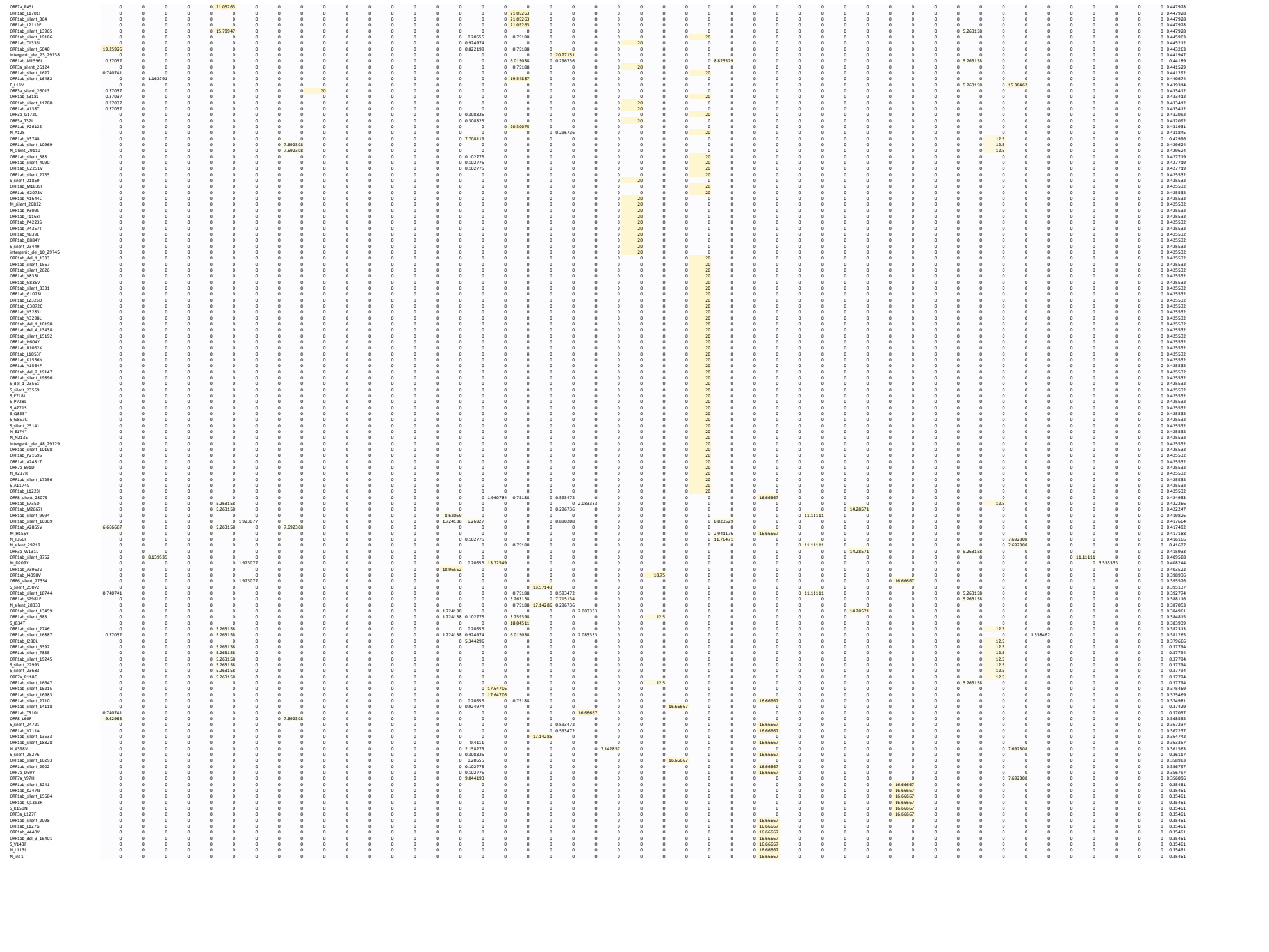
The percent of genomes within each SARS-CoV-2 lineage containing each substitution or deletion.

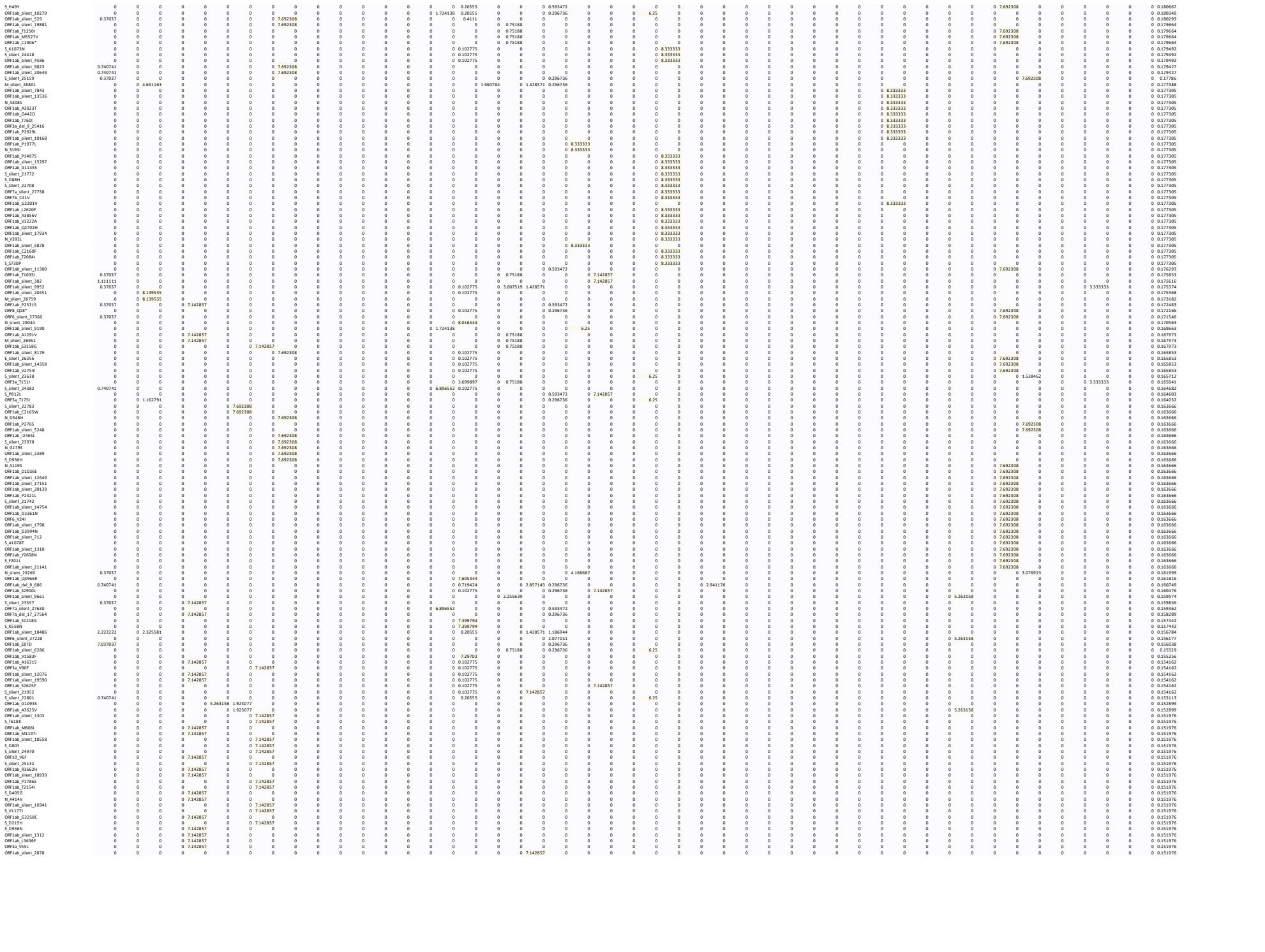
	B.1.617.2	AY.10	AY.25	AY.19	AY.14	AY.12	AY.3	AY.20	AY.4	AY.24	AY.21	AY.15	AY.13	AY.1	AY.2	B.1.243	B.1.1.7	R.1	B.1.2	B.1.637	B.1.526	B.1.575	B.1.234	B.1.110.3	B.1.596	B.1.311	B.1.409	B.1.1.519	B.1.433	B.1.1.434	B.1.595	B.1.429	B.1.427	B.1.351	B.1.588	B.1.525	B.1.623	P.1.10	B.1	None	B.1.1	P.1	B.1.111	P.1.2	B.1.621	B.1.369	B.1.520	cumulative
ORF1ab_silent_3037	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
S_D614G	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	99.92936
intergenic_NA	99.62963	100	100	100	100	100	100	98.07692	100	100	100	100	100	100	100	100	100	99.89723	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	94.73684	100	100	100	100	100	100	100	100	99.83703
ORF1ab_P314L	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	99.79445	100	99.24812	100	99.70326	100	100	100	100	100	100	100	100	100	100	100	100	100	100	85.71429	100	0	100	100	100	100	100	100	100	100	100	100	97.5417
intergenic_del_1_28271	100	75	97.67442	100	100	100	100	98.07692	100	69.23077	100	100	100	100	100	100	100	1.724138	37.20452	100	1.503759	98.57143	99.40653	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10.52632	75	30.76923	0	0	0	0	0	0	42.44017
ORF3a_Q57H	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	99.24812	100	99.40653	100	0	90	100	100	0	0	100	16.66667	100	100	100	100	100	0	100	0	57.89474	37.5	7.692308	1.538462	100	0	96.66667	100	100	40.56624
N_D377Y	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0	0.102775	7.843137	57.14286	0	0.296736	0	0	90	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	37.5	0	0	0	0	0	0	0	38.1465
M_I82T	100	100	100	100	100	100	100	98.07692	100	100	100	100	100	100	100	100	100	0	0	0	0	100	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0	36.66121
S_L452R	98.14815	75	97.67442	100	92.85714	89.47368	100	100	92.30769	95	100	100	100	100	100	66.66667	0	0	0	0	98.57143	0.296736	0	0	0	0	0	0	0	0	0	0	0	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	36.29779
S_D950N	98.88889	75	98.83721	100	100	100	100	98.07692	92.85714	92.30769	100	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12.5	0	0	0	0	0	0	33.30073
ORF1ab_T265I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.205555	0	100	100	100	100	0	0	0	100	100	0	0	100	0	100	0	100	100	100	100	100	0	100	0	36.84211	12.5	15.38462	0	0	0	0	100	33.29643
N_R203M	99.25926	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0	0	0	0	32.96296
ORF1ab_G662S	91.11111	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	1.503759	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0	0	0	0	0	32.82159
ORF1ab_P1000L	91.11111	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0	0	0	0	32.7896
ORF3a_S26L	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0.593472	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37.5	0	0	0	0	0	0	0	32.72539
S_P681R	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37.5	0	0	0	0	0	0	0	32.71277
N_D63G	96.66667	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37.5	0	0	0	0	0	0	0	32.64184
S_T478K	98.14815	50	100	100	100	89.47368	100	100	92.30769	95	100	100	100	100	100	66.66667	0	0	0	0	0.296736	0	0	0	0	0	0	0	97.05882	0	0	0	0	0	0	0	0	0	0	37.5	0	0	0	0	0	0	0	32.4777
S_T19R	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0	32.44681
ORF7a_T120I	100	100	95.34884	100	92.85714	100	100	100	100	100	100	100	100	100	100	66.66667	0	0.205555	0	1.503759	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0	0	0	0	32.05494
ORF7a_V82A	98.88889	100	96.51163	100	85.71429	84.21053	100	92.85714	100	100	100	100	100	100	100	66.66667	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0	0	0	0	31.37977
S_del_6_22029	99.25926	100	97.67442	100	100	100	100	100	100	23.07692	100	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37.5	0	0	0	0	0	0	0	31.01086
ORF8_del_6_28248	90.74074	100	94.18605	66.66667	85.71429	94.73684	98.07692	92.85714	92.30769	100	100	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37.5	0	0	0	0	0	0	0	30.91035
ORF1ab_T325I	68.51852	25	100	0	0	84.21053	100	100	100	95	0	0	0	100	0	0	0	0	0.75188	0	0	97.91667	92.85714	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0	0	100	0	25.83521
N_T205I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.296736	100	0	0	0	0	0	0	0	100	0	100	100	100	100	0	100	0	0	0	0	7.692308	0	100	0	96.66667	0	0	21.37565
ORF1ab_del_9_11288	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	99.89722	0	0	0	100	100	0	0	0	0	0	0	0	0	16.66667	0	0	0	100	0	100	100	0	100	0	5.263158	37.5	23.07692	100	0	100	3.333333	0	18.84547
ORF1ab_A3209V	22.96296	50	0	100	100	15.78947	0	14.28571	0	5	100	100	100	0	100	0	0	0	0	100	0	0	0	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18.68166
N_R203K	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	98.66393	98.03922	0	0	0.593472	0	0	0	0	0	0	0	97.05882	0	100	0	0	0	0	0	0	100	42.10526	25	92.30769	100	0	100	0	0	0	0	18.16528
N_G204R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	98.66393	98.03922	0	0	0.593472	0	0	0	0	0	0	0	97.05882	0	100	0	0	0	0	0	0	100	42.10526	25	92.30769	100	0	100	0	0	0	0	18.16528
S_E484K	0	0	0	0	0	0	0	0	7.692308	0	0	0	0	0	0	0	0.205555	96.07843	0.75188	0	67.35905	0	0	0	0	0	0	0	0	16.66667	0	0	0	0	100	0	100	0	100	0	25	23.07692	96.92308	0	100	90	0	0	17.52668
ORF1ab_A1918V	67.77778	25	100	0	0	84.21053	100	100	100	95	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0	0	0	0	17.48911
ORF1ab_P2046L	68.14815	25	100	0	0	84.21053	98.07692	100	100	95	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0	0	0	0	17.45608
N_G215C	67.40741	25	96.51163	0	0	84.21053	100	100	100	95	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0	0	0	0	17.40701
ORF3a_P228TS	67.03704	25	100	0	0	84.21053	100	100	100	95	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37.5	7.692308	0	0	0	0	0	0	17.37106
ORF1ab_silent_8986	67.77778	25	100	0	0	84.21053	100	100	100	95	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37.5	0	0	0	0	0	0	0	17.22316
ORF1ab_T3646A	67.77778	25	100	0	0	84.21053	100	100	100	95	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37.5	0	0	0	0	0	0	0	17.22316
ORF1ab_silent_11332	67.77778	25	100	0	0	84.21053	100	100	100	95	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37.5	0	0	0	0	0	0	0	17.22316
ORF1ab_A1306S	67.77778	25	100	0	0	84.21053	98.07692	100	100	95	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37.5	0	0	0	0	0	0	0	17.18224
ORF1ab_V2930L	67.40741	25	98.83721	0	0	84.21053	98.07692	100	100	95	0	0	0	100	0	0	0.102775	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37.5	0	0	0	0	0	0	0	17.15181
ORF7b_T40I	67.03704	25	97.67442	0	0	84.21053	100	100	92.30769	95	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37.5	0	0	0	0	0	0	0	16.99425
S_N501Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5.172414	98.3556	0	1.503759	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	100	0	50	23.07692	98.46154	0	100	93.33333	0	0	16.38093
ORF1ab_P1640L	32.22222	75	1.162791	100	100	15.78947	1.923077	0	0	5	100	100	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15.55527
ORF1ab_V3718A	22.96296	75	0	100	100	15.78947	0	0	0	5	100	100	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15.29261
S_P681H	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	98.27586	99.69168	0	0.75188	0	0.296736	100	0	0	0	0	0	100	0	0	100	0	0	0	0	0	0	0	21.05263	50	15.38462	0	0	0	0	96.66667	0	14.51319
ORF1ab_silent_20262	2.962963	25	0	0	100	0	0	0	0	5	100	100	100	0	0	0	0	0	0	0.75188	18.57143	99.40653	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10.52632	0	7.692308	0	0	0	0	0	0	12.12577
S_T95I	14.44444	25	2.325581	0	0	10.52632	0	71.42857	30.76923	0	0	0	0	66.66667	0	0	0.4111	0	1.503759	0	100	0	0	0	0	0	0	0	50	0	0	0	0	0	0	0.833333	0	0	0	10.52632	25	7.692308	0	0	0	0	96.66667	0	11.09137
N_M234I	0	0	0	33.33333	0	0	0	0	0	0	0	0	0	0	0	0	99.89722	0	0	98.57143	75.96439	0	0	0	0	0	0	0	0	16.66667	0	0	0	44.4444	0	0	100	100	0	5.263158	12.5	7.692308	0	0	0	0	0	0	10.1653
ORF1ab_P309L	11.85185	25	0	0	100	0	1.923077	0	0	5	100	100	100	0	0	0	0.4111	1.960784	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9.492485
ORF1ab_silent_1267	11.85185	25	0	0	100	0	1.923077	0	0	5	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9.44202
ORF1ab_L3352F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.205555	0	100	0	0	0	0	0	100	0	0	0	0	100	0	0	100	0	0	100	0	0	0	21.05263	12.5	7.692308	0	0	0	0	0	0	0	9.392564
ORF8_S24L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.724138	0	0	98.49624	0	0	0	0	87.5	0	0	0	0	100	0	0	0	0	100	0	0	0	0	26.31579	0	23.07692	0	0	0	0	0	0	9.300279
ORF1ab_silent_12946	2.962963	25	0	0	100	0	0	0	0	5	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	9.211978
ORF1ab_P1570L	0.37037	25	0	0	100	0	0	0	0	5	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9.156816
ORF7a_L116F	2.962963	25	0	0	92.85714	0	0	0	0	5	100	100	66.66667	0	0	0	0	0	0	0	24.03561	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8.862178
S_del_3_21991	0.37037	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	99.38931	1.960784	0.75188	98.57143	3.857567	0	0	0	18.75	0	0	0	0	0	0	0	0	0	0	100	0	0	50	30.76923	1.538462	0	0	0	0	0	0	0	8.637299
S_L18F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.102775	0	0	0	0.890208	0	0	0	0	0	0	0	85.71429	0	0	100	0	0	12.5	0	0	100	0	0	0	0	0	0	100	3.333333	0	0	8.564694
ORF1ab_T3750I	20.37037	50	0	100	0	15.78947	0	0	0	0	0	0	0	100	0	0	0	0	0.75188	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7.692308	0	0	0	0	0	0	0	8.39583
ORF1ab_silent_13019	20.37037	50	0	100	0	15.78947	0	7.142857	0	0	0	0	0	100	0	0	0.20555	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	8.372516
ORF1ab_silent_13860	0	0	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0	0.75188	0	0	0	0	12.5	0	0	0	0	0	0	0	0	0	0	0	0	100	0	12.5	0	100	0	0	0	0	0	0	0	7.462806
ORF1ab_silent_18877	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.61665	100	0	0	0.593472	2.083333	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10.52632	25	7.692308	0	100	0	100	0	7.372597
S_P265	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.102775	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	12.5	0	100	0	0	100	0	0	0	7.123936
ORF1ab_silent_20268	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	98.27586	0	0	0	0	100	0	0	0	0.833333	100	0	0	0	0	0	0	0	0	0	0	0	0	26.31579	0	0	0	0	0	0	0	0	7.08351
S_A22V	20	50	0	100	0	15.78947	0	0	0	0	0	0	0	100	0	0	0	41.17647	0	0	0.890208	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6.975663
S_H65Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.102775	0	0.75188	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	100	0	100	0	0	6.826695
S_D138Y	0	0	0	0	0	0	0	7.692308	0	0	0	0	0	0	0	0	0.102775	0	0.75188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	12.5	98.46154	0	100	0	0	0	0	6.679053
S_R190S	0	0	0	0	0	0	0	7.692308	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	12.5	96.92308	0	100	0	0	0	0	6.747136
S_T20N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	100	0	100	0	0	0	0	6.648936
intergenic_ins4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	100	0	100	0	0	0	0	6.648936
ORF1ab_K1795Q	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.102775	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	12.5	98.46154	0	100	0	0	0	0	6.61839
ORF1ab_S1898F	0	0	0	0	100	0	0	0	0	5	100	100	0	0	0	0	0	0	0	0	3.560831	0	0	0	0	0	0	0	0	0	0	0	0	0

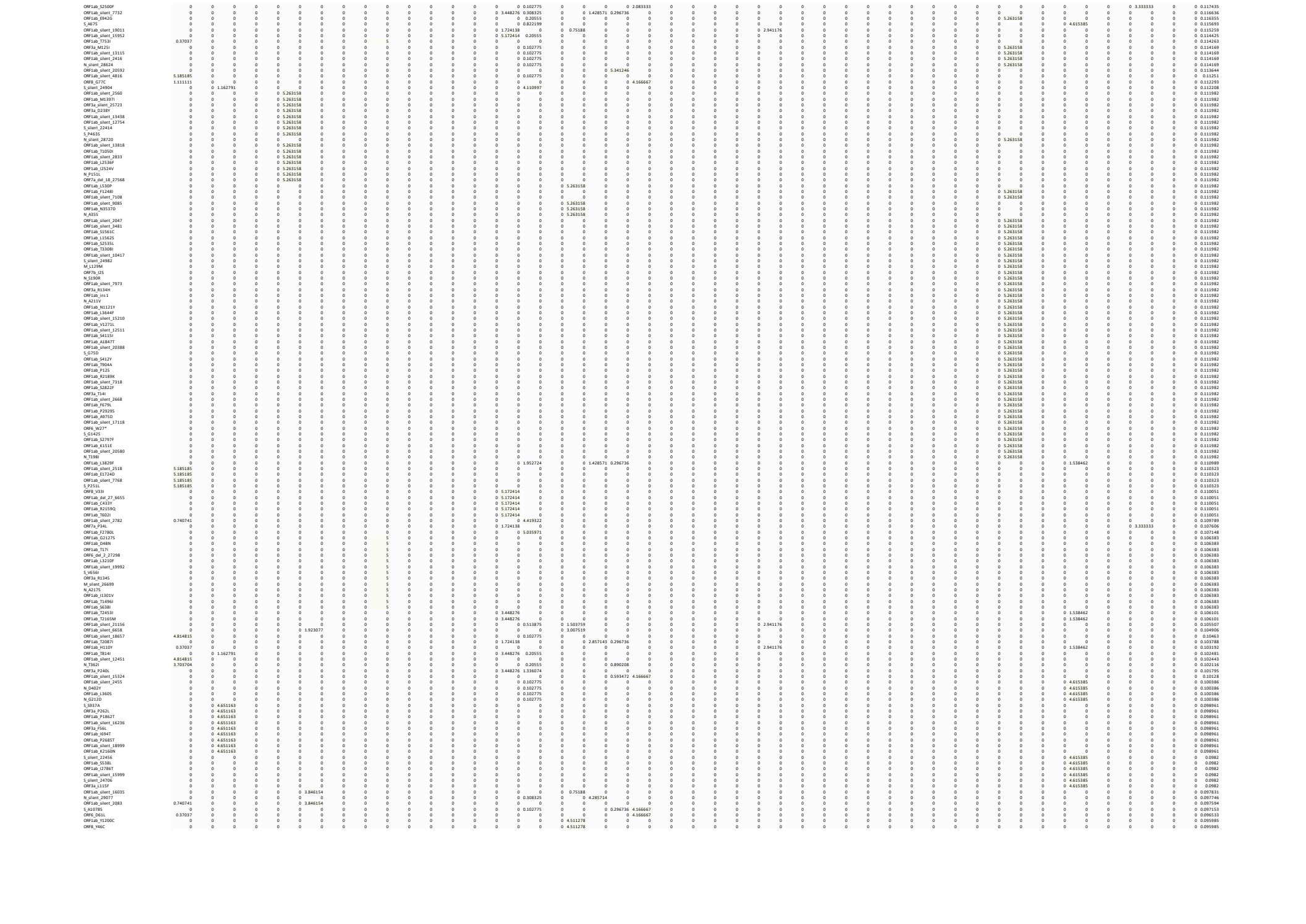












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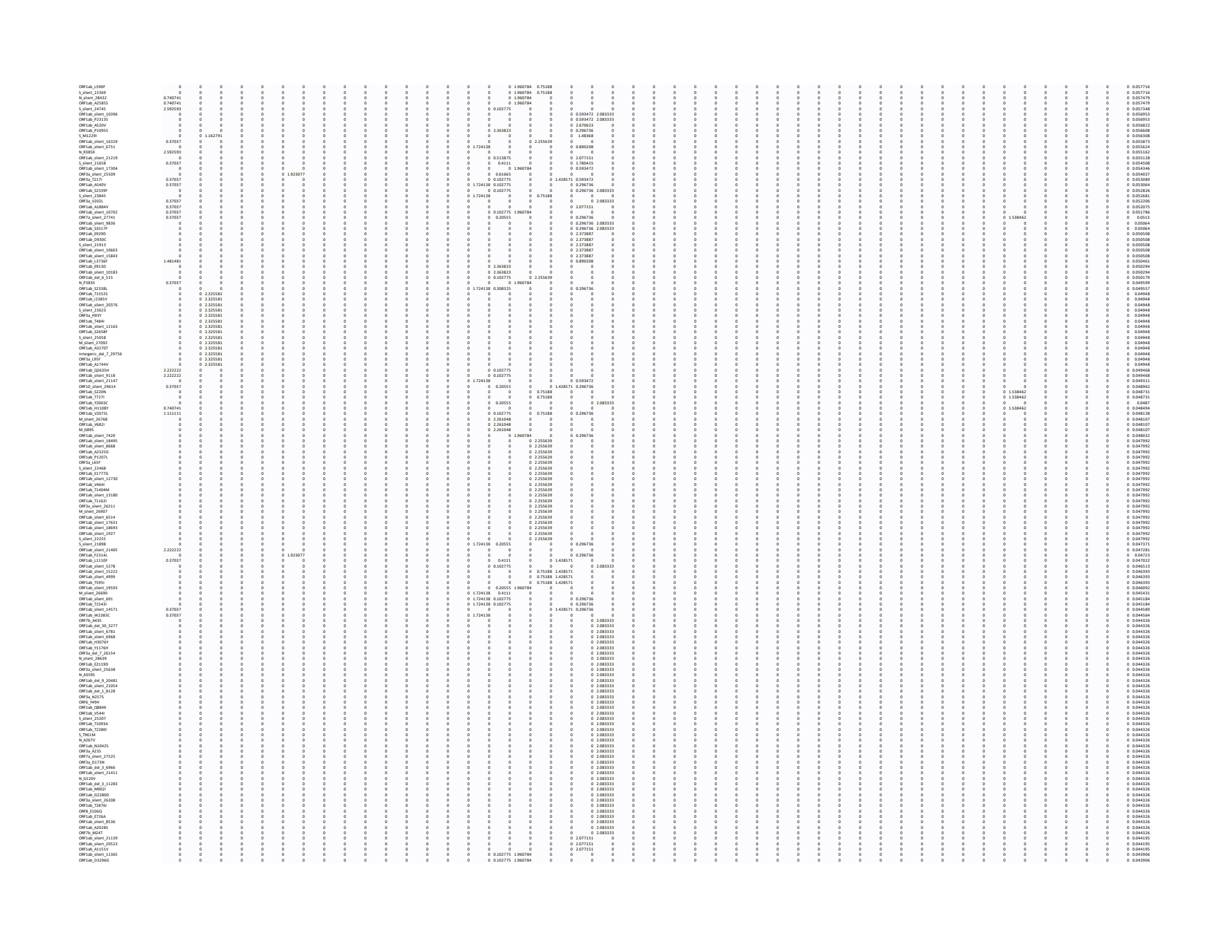

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