

Supplementary Table 1. Gag-Protease genotype and phenotype of baseline (pre-ART) samples relative to p8.MJ4GP

Patient no.	Protease amino acid changes ^a	Gag CS amino acid changes ^a	LPV (FC) ^b S ≤ 3.8	RTV (FC) ^b S ≤ 3.2
1	K20R, E35D, M36I, S37N, S39P, I62V, P63L, T74S, I77V	S373N, T374A	0.5	0.3
2	M36I, S37N, S39P, P63L, I77V, P81T	S373N, T374S, M378V	0.2	0.4
3	E35D, M36I, S37N, S39P, I77V	I134V, S373G, T374G	0.4	0.6
4	E35D, M36I, S37N, S39P, P63L, T74S, I77V	V128T, T374N, S451N	2.7	2.4
5	S12T, I19L, M36I, S37N, S39P, P63L, I77V, T80N, P81T	S373N, T374N, S451N	0.3	0.2
6	S12T, V15I, I19T, M36I, S37N, S39P, I62V, I64L, K70R, I77V	T374G, S451N	0.6	0.6
7	E35D, M36I, S37N, S39P, A71T, I77V	S373N, T374S, S451N	1.8	2.2
8	L10I, K20R, E35D, M36I, S37N, S39P, P63L, C67Y, I77V	S373N, T374S, S451N	0.4	0.3
9	M36I S37N, S39P, P63A, T74S, I77V	V128I, S373N, T374P	1.9	2.1
10	S12T, V15I, S39P	S373N, T374V	4.5	3.8
11	V15I, M36I, S39P, P63S, I77V, V82I	V128I, T374A	0.7	0.7
12	I19V, K20R, E35D, M36I, S37N, S39P, R57K, D60E, Q61E, I77V	S451N	6.4	4.0
13	E35D, M36I, S37N, S39P, P63V, T74S, I77V	T374V, E428K, L449P, P453L	9.5	7.8
14	L10M, S37K, S39P, K41I, P63T, I77V	S373N, T374G, S451N	1.4	0.8
15	I19T, K20R, E35D, M36I, S37N, S39T, P63V, I77V	S373H, T374G, S451N	2.3	0.4
16	S37N, S39P, K41R, P63L, T74S	S373N, T374S, I437L, S451N	1.7	1.2
17	S12A, I19T, M36I, S37N, S39P, D60G, P63V, I64M, I77V	S373N, T374A, S451N	3.2	2.3
18	M36I, S37N, S39P, P63L, I77V, V82I	Y132F, S373K, T374G	4.3	4.8
19	M36L, S37E, S39P, K41R, P63V, I77V	S373T, P453L	1.5	1.9
20	I19T, M36I, S37N, S39P, I77V	S373N, T374S, S451N	1.9	4.9

^a The Protease and Gag CS amino acid changes are reported as changes relative to p8.MJ4GP

^b The fold change in susceptibility for LPV and RTV is based on the EC₅₀ of the baseline sample relative to p8.MJ4GP

Supplementary Table 2. Comparison of phenotypic fold changes calculated using the baseline sample and reference plasmid

Patient ID	Stanford Predicted Phenotype	Actual Phenotype (FC):	
		Baseline	p8.9MJ4GP
1	High	191	74
2*	Intermediate	109	27
3*	Intermediate	68	31
4*	High	5.2	20
5*	Susceptible	4.2	1.3
6	Susceptible	1.3	0.5
7	Susceptible	0.8	1.7
8	Intermediate	12	5.3
9	Intermediate	6.0	12
10	Intermediate	7.6	24
11*	Susceptible	5.9	3.9
12*	Intermediate	1.2	6.5
13	Susceptible	0.1	1.2
14	Susceptible	2.6	3.2
15	Susceptible	0.4	0.6
16	Susceptible	1.3	2.1
17	Susceptible	0.4	1.2
18	Susceptible	2.1	9.9
19	Susceptible	1.0	1.5
20	Susceptible	0.1	0.7

*Samples showing discordance with Stanford.