

Supplemental Table 4. Drug susceptibility data for associating mutations within the protease and NC-p1 and p1-p6 cleavage sites

Protease Mutations	Gag Residue (Cleavage Site)	PI	P-P	P-A	Mean P-P	Mean P-A	Median P-P	Median P-A	Std dev P-P	Std dev P-A	p-value
D30N/N88D	A431 (NC-p1)	APV	133	975	4.7	14.2	2.7	1.1	38.9	27.1	<10.0E-12
		ATV	133	975	16.9	112.4	20.4	3.9	202.1	68.3	<10.0E-12
		IDV	133	975	5.2	26.8	6.2	2.0	64.1	26.3	<10.0E-12
		LPV	133	975	4.1	21.9	4.7	1.2	53.9	21.2	<10.0E-12
		NFV	133	975	117.2	320.7	199.7	61.8	243.0	159.9	<10.0E-12
		RTV	133	975	9.0	44.5	6.7	1.9	87.2	38.0	<10.0E-12
		SQV	133	975	27.3	196.8	9.1	2.7	372.1	135.1	<10.0E-12
		TPV	84	501	1.5	5.0	1.5	0.9	11.0	4.3	6.3E-07
D30N/N88D	I437 (NC-p1)	APV	87	1005	9.1	5.1	1.9	1.1	22.7	26.8	2.1E-05
		ATV	87	1005	42.7	26.6	6.4	4.2	127.6	94.8	9.0E-05
		IDV	86	1004	17.8	6.7	3.3	2.2	61.9	27.8	3.0E-06
		LPV	87	1005	9.6	5.6	2.3	1.3	25.0	26.8	3.9E-06
		NFV	87	1005	221.7	137.2	93.7	66.7	228.4	181.2	1.3E-04
		RTV	87	1005	21.9	12.4	3.3	2.1	62.7	45.4	2.2E-05
		SQV	87	1005	64.4	47.9	5.8	2.9	210.7	190.5	8.3E-05
		TPV	45	526	5.3	1.7	1.1	0.9	13.2	4.4	1.3E-02
D30N/N88D	L449 (p1-p6)	APV	339	728	4.4	8.4	1.4	1.1	34.2	22.6	3.5E-05
		ATV	339	728	23.2	39.4	4.7	4.2	120.7	86.8	1.0E+00
		IDV	339	728	5.9	11.0	2.6	2.0	40.8	27.2	1.1E-06
		LPV	339	728	5.6	6.6	1.5	1.3	19.3	25.8	3.4E-01
		NFV	339	728	131.6	170.9	77.5	65.1	204.9	175.7	6.6E-02
		RTV	339	728	12.2	14.9	2.2	2.1	47.1	45.7	1.0E+00
		SQV	339	728	39.3	72.0	3.5	2.8	234.8	171.2	7.8E-03
		TPV	178	389	1.7	2.6	0.9	0.9	8.0	4.8	1.0E+00
D30N/N88D/L90M	A431 (NC-p1)	APV	40	149	28.3	21.3	9.5	2.4	63.5	66.6	1.1E-02
		ATV	40	149	258.2	52.1	89.3	13.2	271.1	120.1	3.8E-09
		IDV	39	148	70.5	17.4	32.2	4.7	104.5	56.7	5.1E-10
		LPV	40	149	45.5	15.5	26.0	3.5	80.0	49.0	3.3E-08
		NFV	40	149	555.1	305.9	600.0	172.1	137.1	236.7	6.6E-06
		RTV	40	149	121.4	38.3	74.5	12.1	127.1	79.0	6.9E-08
		SQV	40	149	572.2	135.8	1000.0	27.7	459.2	292.7	3.2E-07
		TPV	27	80	11.7	3.8	4.0	1.2	17.9	10.0	1.6E-04

D30N/N88D/L90M	L449 (p1-p6)	APV	76	110	25.3	17.9	3.3	2.7	67.2	55.1	1.0E+00
		ATV	76	110	103.7	91.6	30.4	20.4	188.4	182.6	1.0E+00
		IDV	75	109	35.5	23.3	7.7	5.2	80.8	66.7	1.0E+00
		LPV	76	110	20.6	18.7	6.6	4.2	36.6	52.6	1.0E+00
		NFV	76	110	391.4	341.0	600.0	214.8	242.6	241.2	1.0E+00
		RTV	76	110	51.9	56.8	27.8	18.3	88.6	98.8	1.0E+00
		SQV	76	110	263.7	217.7	43.1	35.2	401.4	373.0	1.0E+00
		TPV	44	64	6.7	5.1	1.2	1.7	15.0	11.1	1.0E+00
D30N/N88D/L90M	S451 (p1-p6)	APV	50	127	17.5	20.5	2.6	3.9	57.6	53.6	1.0E+00
		ATV	50	127	101.7	96.6	20.1	26.2	176.3	186.8	1.0E+00
		IDV	49	127	25.0	31.6	6.5	6.5	60.8	79.2	1.0E+00
		LPV	50	127	25.6	17.3	4.1	6.4	73.8	31.7	1.0E+00
		NFV	50	127	343.7	372.3	205.5	600.0	241.9	244.8	1.0E+00
		RTV	50	127	65.1	53.0	18.9	20.5	99.7	95.6	1.0E+00
		SQV	50	127	262.7	223.2	42.1	34.4	399.3	379.0	1.0E+00
		TPV	25	77	4.9	6.5	1.2	1.6	10.9	13.8	1.0E+00
D30N/N88D/L90M	R452 (p1-p6)	APV	31	150	44.0	18.9	8.0	2.8	99.6	57.9	1.0E+00
		ATV	31	150	210.1	73.7	58.0	16.7	296.0	146.5	1.0E+00
		IDV	31	148	96.8	14.4	20.6	5.0	154.8	22.7	1.0E+00
		LPV	31	150	56.7	15.2	18.4	4.5	99.5	44.1	1.0E+00
		NFV	31	150	424.9	339.9	600.0	219.5	241.3	241.3	1.0E+00
		RTV	31	150	120.5	42.1	43.4	17.2	158.1	70.9	1.0E+00
		SQV	31	150	301.4	215.0	59.1	33.1	421.3	371.9	1.0E+00
		TPV	18	82	22.6	2.3	4.0	1.3	25.0	3.0	6.5E-02
D30N/N88D/L90M	P453 (p1-p6)	ATV	119	65	111.0	72.5	31.6	15.7	200.7	153.3	1.0E+00
		APV	119	65	26.1	17.9	3.2	2.9	73.4	52.5	1.0E+00
		IDV	118	64	39.0	10.2	6.8	6.0	89.2	10.1	1.0E+00
		LPV	119	65	27.7	12.1	6.8	3.7	70.8	22.0	1.0E+00
		NFV	119	65	372.5	338.4	600.0	215.6	241.4	240.9	1.0E+00
		RTV	119	65	63.5	43.1	22.2	17.8	107.5	77.5	1.0E+00
		SQV	119	65	272.0	142.8	39.8	33.6	408.2	302.3	1.0E+00
		TPV	75	34	7.4	2.1	1.6	1.1	14.9	3.7	5.2E-01
150V	K436 (NC-p1)	APV	67	505	108.1	97.5	55.0	47.4	125.7	126.4	1.0E+00
		ATV	67	505	48.9	27.9	16.1	6.8	74.4	80.9	9.7E-02
		IDV	67	505	96.4	37.2	32.5	10.1	134.2	80.7	1.5E-03
		LPV	67	505	273.4	171.3	199.6	106.3	200.0	179.1	5.7E-03
		NFV	67	505	93.1	40.1	36.7	14.6	154.9	76.6	3.9E-02
		RTV	67	505	275.9	204.1	400.0	131.5	157.6	175.1	1.3E-01
		SQV	67	505	453.5	244.0	103.2	14.1	482.7	408.2	4.7E-02
		TPV	48	325	1.4	1.5	0.9	0.7	1.6	4.3	1.0E+00

150V	I437 (NC-p1)	APV	115	476	124.0	87.7	71.4	43.9	133.2	117.7	5.2E-05
		ATV	115	476	65.7	19.1	29.5	5.5	119.7	52.2	<10.0E-12
		IDV	115	468	119.8	24.7	47.3	8.8	151.1	51.4	<10.0E-12
		LPV	115	476	286.4	156.2	233.4	96.0	196.5	169.0	1.2E-10
		NFV	115	476	104.4	30.2	56.1	13.6	156.7	48.4	<10.0E-12
		RTV	115	476	305.0	191.4	400.0	106.6	147.5	173.3	2.6E-10
		SQV	115	476	516.7	197.6	169.2	11.1	482.5	374.1	<10.0E-12
		TPV	68	313	2.4	1.2	1.1	0.6	6.5	3.2	8.5E-04
150V	L449 (p1-p6)	APV	200	371	93.0	100.2	43.4	52.7	125.8	123.8	1.0E+00
		ATV	200	371	25.4	31.9	5.4	7.9	74.1	82.5	1.0E+00
		IDV	200	371	30.8	51.5	7.0	13.3	70.8	100.7	3.7E-03
		LPV	200	371	147.4	200.6	65.4	132.3	180.4	180.2	7.9E-04
		NFV	200	371	33.7	52.2	12.7	18.7	59.6	102.4	1.0E+00
		RTV	200	371	163.3	241.5	77.3	400.0	166.7	171.1	4.4E-05
		SQV	200	371	193.7	297.1	10.6	19.7	368.4	437.9	1.0E+00
		TPV	130	242	1.5	1.4	0.6	0.7	4.8	3.6	1.0E+00
150L	A431 (NC-p1)	APV	62	94	5.5	2.0	2.6	1.0	9.5	2.8	9.3E-04
		ATV	62	94	123.4	42.8	71.5	22.8	166.6	76.5	8.5E-05
		IDV	62	94	3.9	1.3	1.8	0.7	6.7	2.5	5.9E-06
		LPV	62	94	4.8	0.9	1.6	0.5	10.4	1.6	2.4E-04
		NFV	62	94	9.9	3.5	4.3	1.6	17.5	4.9	1.9E-04
		RTV	62	94	9.0	1.9	2.5	0.8	14.2	3.2	4.3E-03
		SQV	62	94	3.1	1.6	1.1	0.7	6.1	2.3	1.0E+00
		TPV	45	60	2.5	1.3	1.2	0.7	4.7	1.8	1.0E+00
V82A	A431 (NC-p1)	APV	1986	1841	31.6	28.9	9.3	8.7	64.2	66.9	1.0E+00
		ATV	1986	1841	74.6	64.0	19.4	20.0	125.2	144.0	1.0E+00
		IDV	1986	1841	41.4	47.9	26.6	20.1	70.1	70.2	1.1E-12
		LPV	1986	1841	90.4	102.2	64.8	45.6	117.5	121.7	1.1E-12
		NFV	1986	1841	65.9	68.5	36.3	31.0	102.2	105.7	2.5E-01
		RTV	1986	1841	201.1	184.1	101.2	120.8	163.1	171.1	1.0E+00
		SQV	1986	1841	96.6	65.6	9.0	9.9	207.3	257.7	1.0E+00
		TPV	1243	1109	4.4	2.9	1.6	2.2	4.4	6.6	<10.0E-12
V82A	I437 (NC-p1)	APV	709	3033	37.4	28.7	14.3	8.4	71.9	64.8	<10.0E-12
		ATV	708	3031	109.3	58.0	38.7	16.6	176.2	118.8	<10.0E-12
		IDV	699	3010	64.5	40.5	33.7	21.5	91.8	64.5	<10.0E-12
		LPV	709	3033	130.2	89.1	83.3	51.7	143.6	114.1	<10.0E-12
		NFV	709	3033	97.2	59.2	51.7	30.5	135.9	92.9	<10.0E-12
		RTV	709	3033	237.6	178.7	342.7	93.2	167.3	164.8	<10.0E-12
		SQV	709	3033	147.6	63.9	16.2	7.9	321.1	204.0	<10.0E-12
		TPV	460	1840	5.2	3.2	2.7	1.7	7.7	5.0	<10.0E-12
V82A	L449	APV	364	3407	29.1	37.1	14.5	8.6	68.2	65.5	6.8E-06
		ATV	364	3407	62.7	99.7	39.5	17.4	152.4	127.4	4.8E-10
		IDV	364	3407	40.0	75.5	37.9	22.1	107.7	61.6	1.2E-10
		LPV	364	3407	91.0	129.0	84.3	52.9	137.4	115.9	3.9E-09

V82A	(p1-p6)	NFV 364	3407	59.8	119.1	59.0	30.9	163.5	91.9	<10.0E-12
		RTV 364	3407	182.6	243.4	400.0	96.1	169.3	165.5	1.6E-07
		SQV 364	3407	69.0	160.9	24.6	8.3	326.8	214.4	<10.0E-12
		TPV 237	2063	3.4	4.4	2.6	1.8	5.3	5.5	1.1E-04
V82A	P453 (p1-p6)	APV 861	2785	28.3	34.8	11.9	8.4	70.0	64.3	4.4E-07
		ATV 861	2785	65.5	75.3	27.2	17.3	137.7	131.1	3.7E-04
		IDV 861	2785	41.0	56.3	27.8	22.0	86.9	63.6	7.0E-06
		LPV 861	2785	91.7	110.7	70.2	51.1	125.6	117.8	2.6E-07
		NFV 861	2785	61.7	83.0	44.1	31.1	124.0	95.3	2.6E-07
		RTV 861	2785	179.2	223.9	171.0	93.2	168.1	165.3	2.0E-10
		SQV 861	2785	77.3	91.5	14.4	8.1	244.6	230.3	5.2E-08
		TPV 543	1689	3.5	3.7	2.2	1.7	5.5	5.5	7.0E-03
V82A/L90M	A431 (NC-p1)	APV 969	1165	42.8	41.1	13.6	15.8	81.6	78.3	1.0E+00
		ATV 969	1165	101.4	84.0	35.5	42.4	141.8	163.4	1.0E+00
		IDV 969	1165	52.9	61.6	34.6	28.2	82.1	77.4	4.5E-04
		LPV 969	1165	115.2	121.4	81.4	68.0	130.1	134.3	5.1E-01
		NFV 969	1165	88.4	94.7	55.4	53.1	122.9	121.1	1.0E+00
		RTV 969	1165	264.7	233.3	192.9	400.0	160.9	160.5	1.3E-02
		SQV 969	1165	122.9	97.9	19.6	21.4	249.1	281.8	1.0E+00
		TPV 610	710	5.6	4.3	2.6	3.1	5.6	7.7	3.9E-02
V82A/L90M	I437 (NC-p1)	APV 423	1653	48.4	40.7	19.7	13.2	85.5	79.7	3.7E-05
		ATV 423	1651	130.1	82.0	59.5	34.2	187.1	141.0	3.3E-10
		IDV 416	1639	75.1	52.5	39.8	29.4	99.6	74.1	3.5E-07
		LPV 423	1653	147.6	111.1	98.8	68.7	151.9	128.4	5.2E-07
		NFV 423	1653	120.0	82.6	69.8	50.2	151.8	111.5	2.4E-08
		RTV 423	1653	284.1	238.0	400.0	230.2	154.9	162.3	3.9E-07
		SQV 423	1653	284.1	238.0	400.0	230.2	154.9	162.3	3.9E-07
		TPV 282	1005	6.9	4.5	3.9	2.5	9.1	6.2	1.8E-09
V82A/L90M	L449 (p1-p6)	APV 200	1888	40.7	52.1	28.1	12.9	82.5	80.2	5.9E-06
		ATV 200	1888	85.0	129.5	80.3	34.6	160.4	146.7	5.0E-09
		IDV 200	1888	50.8	93.4	48.0	29.4	114.3	70.8	1.5E-09
		LPV 200	1888	111.1	157.5	114.6	68.9	145.1	129.0	2.8E-08
		NFV 200	1888	82.0	154.9	89.1	48.7	178.1	110.6	<10.0E-12
		RTV 200	1888	240.1	311.6	400.0	242.9	142.5	162.6	1.6E-06
		SQV 200	1888	95.0	233.5	50.5	17.5	375.7	244.9	<10.0E-12
		TPV 127	1148	4.8	6.1	4.6	2.7	6.3	6.8	6.6E-03
V82A/L90M	P453 (p1-p6)	APV 531	1482	40.8	43.9	17.7	13.0	78.0	81.2	5.5E-02
		ATV 531	1482	89.2	94.8	42.4	36.5	154.9	148.3	1.0E+00
		IDV 531	1482	52.6	68.7	34.9	29.9	96.7	72.8	1.4E-01
		LPV 531	1482	112.3	132.9	86.0	68.7	137.2	130.7	1.8E-03
		NFV 531	1482	85.2	107.6	60.0	51.7	144.1	112.6	3.5E-01
		RTV 531	1482	238.1	276.8	400.0	228.5	155.1	162.8	5.9E-04
		SQV 531	1482	107.8	121.9	25.9	18.0	276.7	264.3	3.3E-02
		TPV 327	912	5.1	4.8	3.0	2.7	6.4	6.9	1.0E+00

184V	A431 (NC-p1)	APV	2157	1919	89.4	66.7	38.4	18.9	124.5	115.5	<10.0E-12
		ATV	2157	1919	178.1	114.6	79.3	42.9	226.2	185.9	<10.0E-12
		IDV	2157	1919	77.0	43.9	44.9	19.9	98.6	73.3	<10.0E-12
		LPV	2157	1919	125.9	80.7	84.4	32.7	130.7	122.0	<10.0E-12
		NFV	2157	1919	117.3	67.5	66.8	37.8	154.1	102.7	<10.0E-12
		RTV	2157	1919	239.8	180.7	249.8	90.6	163.2	167.9	<10.0E-12
		SQV	2157	1919	403.7	302.9	93.6	60.2	454.5	419.0	1.4E-12
		TPV	1515	1174	16.4	12.6	7.5	4.6	18.0	17.0	<10.0E-12
184V	K436 (NC-p1)	APV	263	3907	110.8	75.9	36.1	28.3	148.9	118.2	3.7E-01
		ATV	263	3907	202.0	145.7	82.6	60.9	252.0	208.8	1.6E-01
		IDV	263	3907	79.3	60.5	39.3	31.7	107.9	88.2	1.0E+00
		LPV	263	3907	128.5	102.9	74.5	60.0	152.6	127.6	1.0E+00
		NFV	263	3907	125.5	92.4	58.5	51.2	171.0	133.4	1.0E+00
		RTV	263	3907	254.7	207.9	400.0	131.9	169.5	167.5	4.6E-02
		SQV	263	3907	357.9	355.3	67.8	74.1	446.7	440.5	1.0E+00
		TPV	185	2568	16.2	14.5	7.7	5.9	18.0	18.0	1.0E+00
184V	I437 (NC-p1)	APV	543	3673	99.1	74.8	43.8	26.5	130.7	118.7	3.0E-12
		ATV	543	3667	192.9	143.1	84.1	58.2	236.2	207.9	5.2E-11
		IDV	533	3636	84.3	58.3	40.6	30.9	112.2	84.9	1.4E-09
		LPV	543	3673	136.5	99.7	82.6	56.9	148.1	125.7	<10.0E-12
		NFV	543	3673	118.2	92.0	66.6	50.4	154.2	135.0	1.2E-10
		RTV	543	3672	261.8	202.6	400.0	123.6	161.9	167.7	<10.0E-12
		SQV	543	3673	413.8	345.8	93.3	71.0	459.0	437.3	8.7E-04
		TPV	392	2396	21.3	13.5	11.8	5.2	20.3	16.8	<10.0E-12
184V	R452 (p1-p6)	APV	724	3413	92.3	75.6	39.8	26.5	127.7	119.4	3.1E-08
		ATV	724	3413	176.1	144.6	84.8	56.8	219.0	211.9	2.0E-10
		IDV	724	3413	81.9	57.9	46.2	30.3	103.6	86.6	<10.0E-12
		LPV	724	3413	134.3	98.8	84.1	55.6	144.7	126.2	<10.0E-12
		NFV	724	3413	128.8	88.6	68.5	49.1	164.9	130.6	0.0E+00
		RTV	724	3413	237.8	205.3	242.0	128.0	165.1	168.0	3.2E-05
		SQV	724	3413	466.5	329.2	132.8	65.2	464.1	431.5	<10.0E-12
		TPV	504	2240	16.1	14.5	7.1	5.6	18.0	18.0	1.0E+00
184V	P453 (p1-p6)	APV	3264	780	81.4	68.3	31.2	24.1	122.8	112.4	2.6E-02
		ATV	3264	780	154.4	142.2	62.8	53.4	215.5	211.9	1.0E+00
		IDV	3264	780	63.9	57.7	33.3	29.8	92.5	86.4	1.0E+00
		LPV	3264	780	107.1	101.7	62.5	59.4	132.0	127.6	1.0E+00
		NFV	3264	780	101.7	78.3	55.1	41.8	143.5	124.0	3.2E-08
		RTV	3264	780	209.1	222.8	134.8	182.3	167.6	170.1	1.0E+00
		SQV	3264	780	372.6	276.0	82.0	48.2	445.1	409.7	3.9E-12
		TPV	2160	516	14.2	17.1	5.7	8.2	17.0	19.0	3.8E-01
184V/1.00M	A431	APV	1580	1427	98.4	76.0	42.0	22.6	131.1	123.7	<10.0E-12
		ATV	1580	1427	205.6	131.3	103.8	54.7	263.4	195.6	<10.0E-12
		IDV	1580	1427	90.0	51.0	53.4	24.6	105.6	77.5	<10.0E-12
		LPV	1580	1427	136.5	91.7	92.7	40.3	135.1	129.6	<10.0E-12

184V/L90M	(NC-p1)	NFV	1580	1427	137.1	81.1	79.8	50.5	162.4	112.2	<10.0E-12
		RTV	1580	1427	263.3	202.9	400.0	123.5	156.0	168.0	<10.0E-12
		SQV	1580	1427	497.0	374.7	172.7	85.8	462.3	440.9	<10.0E-12
		TPV	1090	857	16.1	12.4	7.7	4.7	18.0	16.0	5.6E-10
184V/L90M	K436 (NC-p1)	APV	192	2898	126.7	84.1	39.9	32.7	159.0	125.0	1.0E+00
		ATV	192	2898	236.5	166.7	114.1	72.7	260.1	219.2	2.0E-02
		IDV	192	2898	91.5	70.0	51.8	38.8	110.1	93.9	1.3E-01
		LPV	192	2898	145.9	112.8	85.3	67.7	161.1	132.7	1.0E+00
		NFV	192	2898	152.9	108.3	86.1	64.0	182.9	142.0	6.1E-02
		RTV	192	2898	280.9	230.1	400.0	192.9	161.5	164.6	4.9E-02
		SQV	192	2898	448.2	435.1	110.6	115.1	464.5	455.5	1.0E+00
		TPV	134	1871	17.4	14.2	8.3	5.8	19.0	17.0	1.0E+00
184V/L90M	I437 (NC-p1)	APV	381	2736	108.8	83.9	47.7	31.0	136.4	126.2	1.7E-08
		ATV	381	2732	220.9	164.7	107.5	71.0	246.4	218.1	3.0E-08
		IDV	375	2736	94.8	68.0	47.4	38.5	118.8	90.4	4.1E-05
		LPV	381	2736	140.4	111.3	88.5	65.4	145.7	132.6	2.4E-07
		NFV	381	2736	141.2	108.1	86.0	63.0	169.4	142.8	1.0E-07
		RTV	381	2735	284.1	225.7	400.0	177.2	153.3	165.3	8.3E-11
		SQV	381	2736	504.3	426.7	156.2	111.5	466.7	454.1	9.4E-03
		TPV	268	1758	19.1	13.5	10.2	5.5	19.3	16.8	2.2E-08
184V/L90M	R452 (p1-p6)	APV	576	2479	96.6	85.9	42.8	31.4	131.1	127.8	2.9E-03
		ATV	576	2479	194.8	167.0	99.6	69.7	225.8	223.0	1.8E-05
		IDV	576	2479	92.0	67.3	54.6	37.0	108.0	92.0	8.8E-11
		LPV	576	2479	138.1	110.6	88.7	64.0	142.8	133.7	7.3E-08
		NFV	576	2479	143.9	105.4	81.8	62.8	171.5	139.8	2.3E-09
		RTV	576	2479	255.4	229.2	400.0	192.2	160.4	165.6	4.7E-02
		SQV	576	2479	546.8	408.3	1000.0	100.5	463.3	450.2	5.3E-10
		TPV	407	1587	15.8	14.2	6.9	5.7	18.0	17.0	1.0E+00
184V/L90M	P453 (p1-p6)	APV	2505	501	89.3	81.5	34.1	29.0	129.2	123.7	1.0E+00
		ATV	2505	501	176.4	162.0	77.3	70.2	226.1	222.0	1.0E+00
		IDV	2505	501	73.6	67.7	40.4	36.9	98.3	93.3	1.0E+00
		LPV	2505	501	115.9	117.9	70.2	64.9	135.1	142.3	1.0E+00
		NFV	2505	501	116.7	98.4	66.6	57.4	151.0	139.5	1.3E-02
		RTV	2505	501	230.9	247.6	193.1	400.0	164.3	167.3	1.0E+00
		SQV	2505	501	446.0	364.3	123.4	71.2	456.6	443.1	4.4E-05
		TPV	1639	316	13.9	16.9	5.8	7.5	17.0	19.0	1.0E+00
N88D	A431 (NC-p1)	APV	149	1085	14.1	5.1	3.0	1.1	37.5	28.5	<10.0E-12
		ATV	149	1085	106.7	17.2	23.5	3.9	192.2	65.6	<10.0E-12
		IDV	149	1085	27.3	5.8	7.0	2.1	61.0	25.5	<10.0E-12
		LPV	149	1085	25.5	5.6	5.7	1.3	53.6	27.0	<10.0E-12
		NFV	149	1085	293.0	109.0	157.9	57.5	243.5	154.9	<10.0E-12
		RTV	149	1085	58.2	13.4	10.5	2.1	105.9	51.8	<10.0E-12
		SQV	149	1085	185.0	30.2	10.9	2.8	354.3	141.6	<10.0E-12
		TPV	92	554	5.1	1.9	1.7	0.9	11.0	5.4	<10.0E-12

N88D	A449 (p1-p6)	APV	365	824	8.26	4.96	1.46	1.15	33.1	25.7	1.8E-06
		ATV	365	824	40.1	22.72	5.05	4.21	117.4	82.2	4.5E-02
		IDV	365	824	11.89	6.51	2.72	2.17	39.9	26.1	1.3E-06
		LPV	365	824	8.68	7.44	1.61	1.37	22.1	32.0	1.2E-01
		NFV	365	824	164.59	119.52	76.04	59.48	201.1	168.8	3.6E-05
		RTV	365	824	23.16	16.9	2.37	2.26	68.5	58.6	1.0E+00
		SQV	365	824	76.19	39.72	3.85	2.84	237.3	168.4	1.7E-04
N88D/L90M	A431 (NC-p1)	TPV	365	824	76.19	39.72	3.85	2.84	8.7	5.4	1.7E-04
		APV	51	210	26.0	18.4	7.6	2.4	57.7	62.6	3.9E-04
		ATV	51	210	217.9	46.1	81.9	13.4	252.5	104.1	1.5E-11
		IDV	51	210	62.9	17.3	31.3	5.2	93.7	48.6	2.0E-11
		LPV	51	210	48.7	20.1	31.4	4.0	73.1	56.7	2.1E-09
		NFV	51	210	451.0	230.0	600.0	113.6	234.4	236.2	7.7E-05
		RTV	51	210	139.0	53.1	93.1	15.7	138.7	101.6	7.0E-09
L90M	A431 (NC-p1)	SQV	51	210	471.0	125.0	177.2	24.8	451.9	279.7	2.7E-08
		TPV	32	115	11.0	4.5	4.5	1.3	17.0	10.0	3.7E-04
		APV	669	2486	44.1	17.2	14.67	1.7	85.3	58.7	<10.0E-12
		ATV	669	2486	77.76	25.62	28.76	3.04	140.7	81.0	<10.0E-12
		IDV	669	2486	78.48	16.52	37.8	3.6	107.4	47.9	<10.0E-12
		LPV	669	2486	108.87	25.56	62.7	1.77	136.1	75.2	<10.0E-12
		NFV	669	2486	114.55	29.7	55.56	10.08	155.6	73.8	<10.0E-12
RTV	669	2486	200.53	49.64	124.87	5.72	174.7	114.4	<10.0E-12		
L90M	A431 (NC-p1)	SQV	669	2486	79.98	26.4	14.3	3.14	225.4	126.3	<10.0E-12
		TPV	424	1396	10.31	4.59	4.08	1.26	15.0	10.0	<10.0E-12

L90M	K436 (NC-p1)	APV	213	2884	44.8	20.88	7.2	2.01	96.2	62.3	<10.0E-12
		ATV	213	2884	56.97	34.66	14.37	4.15	111.7	95.7	<10.0E-12
		IDV	213	2884	47.38	27.8	17.16	4.81	84.5	67.7	<10.0E-12
		LPV	213	2884	69.62	40.46	20.65	2.22	107.9	95.4	<10.0E-12
		NFV	213	2884	63.37	45.94	29.69	13.17	104.0	100.9	<10.0E-12
		RTV	213	2884	134.29	77.05	45.19	7.09	161.7	138.7	<10.0E-12
		SQV	213	2884	56.83	35.48	9.96	3.7	189.3	149.6	4.1E-09
		TPV	138	1661	10.22	5.59	2.54	1.37	16.0	11.0	2.5E-06
L90M	L449 (p1-p6)	APV	328	2799	38.49	21.45	4.28	2.09	88.1	63.3	2.0E-04
		ATV	328	2799	69.05	33.06	8.48	4.54	147.0	90.3	8.0E-04
		IDV	328	2799	50.94	27.43	7.72	5.14	103.2	64.4	5.1E-02
		LPV	328	2799	69.26	40.93	4.16	2.46	133.1	93.6	1.0E-01
		NFV	328	2799	81.39	44.12	23.25	13.76	148.3	95.0	1.6E-06
		RTV	328	2799	115.37	78.65	12.57	7.77	165.1	138.6	2.8E-01
		SQV	328	2799	66.24	33.22	6.67	3.85	214.1	141.5	2.2E-04
		TPV	199	1612	6.97	5.86	1.79	1.45	12.0	12.0	1.0E+00
L90M	S451 (p1-p6)	APV	373	2695	17.61	23.61	2.8	2.15	47.9	67.9	1.0E+00
		ATV	373	2695	41.45	36.94	7.72	4.59	103.9	100.0	7.6E-03
		IDV	373	2695	34.59	29.71	6.75	5.21	83.2	69.3	4.7E-01
		LPV	373	2695	45.13	43.33	3.57	2.45	107.9	96.3	1.0E+00
		NFV	373	2695	53.35	47.84	16.66	14.08	106.8	103.4	3.2E-01
		RTV	373	2695	86.9	81.67	12.54	7.85	145.1	141.4	3.6E-01
		SQV	373	2695	28.79	37.95	5.66	3.94	105.8	156.6	1.2E-02
		TPV	210	1549	4.98	6.09	1.6	1.42	9.4	12.0	1.0E+00
L90M	R452 (p1-p6)	APV	53	3124	44.18	22.55	6.4	2.14	93.2	65.7	1.2E-01
		ATV	53	3124	64.34	36.16	13.17	4.66	139.5	97.1	3.3E-01
		IDV	53	3124	66.57	29.15	9.8	5.19	119.5	68.4	7.2E-01
		LPV	53	3124	80.87	42.65	14.14	2.52	138.5	96.1	6.1E-01
		NFV	53	3124	68.01	47.3	27.83	14.25	120.6	101.1	1.0E+00
		RTV	53	3124	146.54	80.7	37.2	8.02	178.5	140.7	7.9E-01
		SQV	53	3124	49.2	36.69	11.36	3.95	140.1	152.1	2.3E-02
		TPV	32	1808	8.53	5.85	3.39	1.44	11.0	11.0	1.0E+00
L90M	P453 (p1-p6)	APV	797	2127	38.45	16.64	3.86	1.94	90.5	50.5	<10.0E-12
		ATV	797	2127	54.27	32.29	10.37	3.84	122.3	93.6	<10.0E-12
		IDV	797	2127	40.71	27.49	8.49	4.79	84.8	67.2	3.7E-10
		LPV	797	2127	58.59	38.4	4.71	2.25	112.1	91.8	2.0E-09
		NFV	797	2127	70.62	41.41	21.44	12.58	132.1	92.0	0.0E+00
		RTV	797	2127	101.3	75.45	14.94	7.01	151.7	137.0	3.0E-08
		SQV	797	2127	53.7	33.83	7.05	3.37	180.4	149.8	0.0E+00
		TPV	502	1195	7.21	5.56	1.76	1.38	13.0	11.0	1.6E-02

P-P -- Samples with specified mutations present in both the protease and the cleavage site

P-A -- Samples with specified mutations present in the protease but absent the in cleavage site

p-values < 0.05 are significant