

PI Major Mutations:None

PI Accessory Mutations:None

PR Other Mutations:M36I 100%
cons:2,208 • R41K 97%
cons:2,209 • I64V 100%
cons:2,214 • C95CA 100%
cons:2,220 • T96TA 100%
cons:2,247 • L97L 100%
cons:2,254

Protease Inhibitors	
atazanavir/r (ATV/r)	Susceptible
darunavir/r (DRV/r)	Susceptible
fosamprenavir/r (FPV/r)	Susceptible
indinavir/r (IDV/r)	Susceptible
lopinavir/r (LPV/r)	Susceptible
nelfinavir (NFV)	Susceptible
saquinavir/r (SQV/r)	Susceptible
tipranavir/r (TPV/r)	Susceptible

No drug resistance mutations were found for PI.

NRTI Mutations:M41L 100%
cons:2,208 • D67N 97%
cons:2,240 • K70R 100%
cons:2,242 • V75M 100%
cons:2,210 • M184V 99%
cons:2,208 • L210LW 100%
cons:2,240 • T215TY 100%
cons:2,242 • K219E 99%
cons:2,239

NNRTI Mutations:V108I 100%
cons:2,362 • G190A 100%
cons:2,440

RT Other Mutations:V35T 100%
cons:2,295 • T39K 100%
cons:2,243 • K49R 100%
cons:2,242 • V60I 100%
cons:2,304 • I94L 100%
cons:2,293 • D121Y 100%
cons:2,254 • K122E 99%
cons:2,256 • I135T 99%
cons:2,222 • G196GR 100%
cons:2,302 • T200A 100%
cons:2,209 • E203EK 100%
cons:2,224 • Q207E 99%
cons:2,242 • R211K 100%
cons:2,240 • L228LH 100%
cons:2,245 • D237DE 100%
cons:2,293 • V243K 100%
cons:492 • K249Q 100%
cons:492 • D250E 100%
cons:492

Nucleoside Reverse Transcriptase Inhibitors		Non-nucleoside Reverse Transcriptase Inhibitors	
abacavir (ABC)	High-Level Resistance	doravirine (DOR)	Potential Low-Level Resistance
zidovudine (AZT)	High-Level Resistance	efavirenz (EFV)	Intermediate Resistance
stavudine (D4T)	High-Level Resistance	etravirine (ETR)	Potential Low-Level Resistance
didanosine (DDI)	High-Level Resistance	nevirapine (NVP)	High-Level Resistance
emtricitabine (FTC)	High-Level Resistance	rilpivirine (RPV)	Low-Level Resistance
lamivudine (3TC)	High-Level Resistance		
tenofovir (TDF)	High-Level Resistance		

RT comments

NRTI

- M41L is a TAM that usually occurs with T215Y. In combination, M41L plus T215Y confer intermediate / high-level resistance to AZT and d4T and contribute to reduced ddi, ABC and TDF susceptibility.
- D67N is a non-polymorphic TAM associated with low-level resistance to AZT.
- K70R is a TAM that confers intermediate resistance to AZT and contributes to reduced ABC and TDF susceptibility in combination with other TAMs.
- V75T/M/A/S are nonpolymorphic accessory NRTI-selected mutations. They appear to have minimal phenotypic effects on AZT, ABC, and TDF.
- M184V/I cause high-level in vitro resistance to 3TC and FTC and low/intermediate resistance to ABC (3-fold reduced susceptibility). M184V/I are not contraindications to continued treatment with 3TC or FTC because they increase susceptibility to AZT and TDF and are associated with clinically significant reductions in HIV-1 replication.
- L210W is a TAM that usually occurs in combination with M41L and T215Y. The combination of M41, L210W and T215Y causes high-level resistance to AZT and intermediate resistance to ABC and TDF.
- T215Y/F are TAMs that causes intermediate/high-level resistance to AZT and potentially low-level resistance to ABC and TDF.
- K219E/Q/N/R are accessory TAMs that usually occur in combination with multiple other TAMs.

NNRTI

- V108I is a relatively non-polymorphic accessory mutation selected in vitro and/or in vivo with each of the NNRTIs. It appears to contribute to reduced susceptibility to most NNRTIs only in combination with other NNRTI-resistance mutations.
- G190A is a non-polymorphic mutation that causes high-level resistance to NVP and intermediate resistance to EFV. It does not significantly reduce susceptibility to RPV, ETR, or DOR.

- This virus is predicted to have low-level reduced susceptibility to RPV. The use of the combination of CAB/ RPV should be considered to be relatively contraindicated.

Drug resistance mutation scores of NRTI:

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Rule	ABC	AZT	D4T	DDI	FTC	3TC	TDF
<u>M41L</u>	5	15	15	10	0	0	5
<u>M41L + D67N + T215TY</u>	5	5	5	5	0	0	5
<u>M41L + M184V + T215TY</u>	10	0	0	0	0	0	0
<u>M41L + L210LW</u>	10	10	10	10	0	0	10
<u>M41L + L210LW + T215TY</u>	10	0	0	0	15	15	10
<u>M41L + T215TY</u>	10	10	10	10	5	5	10
<u>D67N</u>	5	15	15	5	0	0	5
<u>D67N + K70R + M184V + K219E</u>	10	0	0	0	0	0	0
<u>D67N + K70R + K219E</u>	10	15	10	10	10	10	10
<u>D67N + T215TY + K219E</u>	5	5	5	5	0	0	5
<u>K70R</u>	5	30	15	10	0	0	5
<u>M184V</u>	15	-10	-10	10	60	60	-10
<u>L210LW</u>	5	15	15	10	0	0	5
<u>L210LW + T215TY</u>	10	10	10	10	0	0	10
<u>T215TY</u>	10	60	40	15	0	0	10
<u>K219E</u>	5	10	10	5	0	0	5
<u>V75M</u>	0	10	30	15	0	0	0
<u>K70R + T215TY</u>	0	0	5	5	0	0	0
Total	130	200	185	135	90	90	85

Drug resistance mutation scores of NNRTI:

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Rule	DOR	EFV	ETR	NVP	RPV
<u>V108I</u>	10	10	0	15	0
<u>G190A</u>	0	45	10	60	15
Total	10	55	10	75	15