

PI Major Mutations:None

PI Accessory Mutations:None

PR Other Mutations:I13V 100%
seen:161 • K14R 100%
seen:161 • E35D 100%
seen:1,401 • M36I 100%
seen:1,401 • R41K 100%
seen:1,114 • R57K 100%
seen:1,401 • H69K 100%
seen:1,309 • L89M 100%
seen:1,935

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:None

NNRTI Mutations:[V179L](#) 1-100%
seen:2,112 • [Y188YL](#) 1-100%
seen:2,112 • [G190A](#) 100%
seen:2,875

RT Other Mutations:E6K 100%
seen:1,817 • K11T 100%
seen:1,104 • K20R 100%
seen:1,104 • V21I 100%
seen:1,104 • V35T 100%
seen:2,394 • T39M 100%
seen:1,812 • K43KR 1-100%
seen:2,117 • V60I 100%
seen:2,114 • K66KR 1-100%
seen:2,114 • K102Q 100%
seen:2,114 • K122E 100%
seen:1,812 • D123N 100%
seen:1,812 • T139TA 1-100%
seen:1,842 • K173S 100%
seen:2,112 • Q174K 100%
seen:2,112 • D177E 100%
seen:1,812 • T200A 100%
seen:1,104 • Q207E 100%
seen:1,104 • R211K 100%
seen:1,104 • F214L 100%
seen:1,104 • V243Q 100%
seen:1,104 • E248D 100%
seen:194 • K249Q 100%
seen:194 • E529D 100%
seen:16 • A534S 100%
seen:62

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

RT comments

NNRTI

- V179L is a rare non-polymorphic mutation listed as a RPV-associated resistance mutation by the FDA package insert. Its effects on NNRTI susceptibility have not been well studied.
- Y188L is a non-polymorphic mutation that confers high-level resistance to NVP, EFV, RPV, and DOR, and potentially low-level resistance to ETR.
- 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.

Other

- V179I is a polymorphic mutation that is frequently selected in persons receiving ETR and RPV. However, it has little, if any, direct effect on NNRTI susceptibility.

No drug resistance mutations were found for NRTI.

Drug resistance mutation scores of NNRTI:					
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Rule	DOR	EFV	ETR	NVP	RPV
Y188YL	60	60	10	60	60
V179IL	0	10	10	10	15
G190A	0	45	10	60	15
Total	60	115	30	130	90

INSTI Major Mutations:None

INSTI Accessory Mutations:None

IN Other Mutations:E11D 100%
seen:17 • K14R 100%
seen:17 • A21T 100%
seen:62 • V31I 100%
seen:68 • L101LI 1-100%
seen:17 • T112V 100%
seen:61 • I113V 100%
seen:61 • T124N 100%
seen:126 • T125A 100%
seen:126 • G134N 100%
seen:117 • G193GR 1-100%
seen:208 • I203M 100%
seen:104 • T210TI 1-100%
seen:161 • K211R 100%
seen:162 • L234I 100%
seen:104 • A265V 100%
seen:174 • S283G 100%
seen:161

Integrase Strand Transfer Inhibitors	
bictegravir (BIC)	Susceptible
cabotegravir (CAB)	Susceptible
dolutegravir (DTG)	Susceptible
elvitegravir (EVG)	Susceptible
raltegravir (RAL)	Susceptible

No drug resistance mutations were found for INSTI.