Drug resistance interpretation: PR

HIVDB 9.5.1 (2023-11-05)

PI Major Mutations: None

PI Accessory Mutations: None

PR Other Mutations: I13V 98% cov=29,742 • I15V 90% cov=30,445 • E35D 93% cov=33,602 • M36I 98% cov=33,593 • R41K 98% cov=33,446 • I62V 91% cov=28,080 • H69K 94% cov=25,990 • T74S 90% cov=24,471 • L89M 98% cov=18,983

Protease Inhibitors	
atazanavir/r (ATV/r)	Susceptible
darunavir/r (DRV/r)	Susceptible
lopinavir/r (LPV/r)	Susceptible

PR comments

Other

- **T74S** is a PI-selected accessory mutation that is polymorphic in most non-B subtypes.

Mutation scoring: PR

HIVDB 9.5.1 (2023-11-05)

No drug resistance mutations were found for PI.

Drug resistance interpretation: RT

HIVDB 9.5.1 (2023-11-05)

NRTI Mutations: D67N 91% cov=14,578 • K70R 95% cov=14,408 • K219Q 94% cov=17,071

NNRTI Mutations: K103N 97% cov=14,255 • E138A 95% cov=16,814 • P225H 94% cov=16,517

RT Other Mutations: E6G 92% cov=16,727 • V8VI I: 75%, V: 23% • K20R 94% cov=16,408 • V35T 98% cov=15,654 • V60I 97% cov=15,282 • K101Q 95% cov=14,155 • K122E 99% cov=15,178 • D123S 95% cov=14,442 • I135T 97% cov=16,726 • K173A 96% cov=21,600 • Q174K 97% cov=21,604 • T200A 98% cov=20,665 • Q207A 96% cov=17,654 • R211S 96% cov=18,117 • F214L 94% cov=17,259 • V245T 92% cov=11,331 • D250E 94% cov=10,918 • T286A 93% cov=7,172 • E291D 88% cov=6,517 • V292VI I: 87%, V: 12% • I293V 95% cov=6,508 • P294T 89% cov=6,516 • E300EV V: 53%, E: 46% cov=8,262 • E312ED D: 87%, E: 10% cov=5,840

Nucleoside Reverse Transcriptase Inhibitors	
abacavir (ABC)	Low-Level Resistance
zidovudine (AZT)	High-Level Resistance
emtricitabine (FTC)	Potential Low-Level Resistance
lamivudine (3TC)	Potential Low-Level Resistance
tenofovir (TDF)	Low-Level Resistance

Non-nucleoside Reverse Transcriptase Inhibitors	
doravirine (DOR)	Intermediate Resistance
efavirenz (EFV)	High-Level Resistance
etravirine (ETR)	Potential Low-Level Resistance
nevirapine (NVP)	High-Level Resistance
rilpivirine (RPV)	Low-Level Resistance

RT comments

NRTI

- **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.
- **K219E/Q/N/R** are accessory TAMS that usually occur in combination with multiple other TAMs.

NNRTI

- **K103N** is a non-polymorphic mutation that confers high-level reductions in NVP and EFV susceptibility. It is the most commonly transmitted DRM.
- **E138A** is a common polymorphic accessory mutation weakly selected in persons receiving ETR and RPV. It reduces ETR and RPV susceptibility ~2-fold. Its effect on ETR- and RPV-containing regimens is likely to be minimal.
- **P225H** is a non-polymorphic EFV-selected mutation that usually occurs in combination with K103N. The combination of **P225H** and K103N synergistically reduces NVP, EFV and DOR susceptibility.

Other

- **K101Q** is a relatively non-polymorphic mutation that is weakly selected in persons receiving NVP and EFV. It is of uncertain phenotypic and clinical significance.
- 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.

Mutation scoring: RT HIVDB 9.5.1 (2023-11-05)

Drug resistance mutation scores of NRTI: Download CSV

Rule	ABC	AZT	FTC	3TC	TDF
D67N	5	15	0	0	5
D67N + K70R + K219Q	10	15	10	10	10
K70R	5	30	0	0	5
K219Q	5	10	0	0	5
Total	25	70	10	10	25

Drug resistance mutation scores of NNRTI: Download CSV

Rule	DOR	EFV	ETR	NVP	RPV
K103N + P225H	10	0	0	0	0
P225H	20	45	0	45	0
K103N	0	60	0	60	0
E138A	0	0	10	0	15
Total	30	105	10	105	15