Drug resistance interpretation: PR

HIVDB 9.5.1 (2023-11-05)

PI Major Mutations: None

PI Accessory Mutations: None

PR Other Mutations: I13V 99% cov=30,053 • K20R 94% cov=31,029 • E35D 94% cov=34,425 • M36I 97% cov=34,409 • N37D 94% cov=34,413 • R41K 98% cov=34,932 • K45R 94% cov=34,941 • R57K 96% cov=32,070 • L63P 94% cov=29,837 • H69K 92% cov=27,769 • K70R 89% cov=27,768 • L89M 98% cov=18,516

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

PR comments

Other

- **K20R** is a highly polymorphic PI-selected accessory mutation that increases replication fitness in viruses with PI-resistance mutations.

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: K70KE E: 62%, K: 38% • M184V 97% cov=13,151

NNRTI Mutations: K103N 97% cov=8,016 • P225H 91% cov=6,269

RT Other Mutations: K20R 79% cov=16,632 • V35T 99% cov=15,039 • K43KR R: 78%, K: 20% cov=14,129 • K49R 96% cov=13,448 • V60I 98% cov=11,773 • K122KE E: 79%, K: 20% cov=9,668 • D123G 77% cov=9,601 • I135T 97% cov=12,326 • E169D 96% cov=15,788 • K173A 96% cov=14,757 • Q174K 97% cov=14,761 • D177E 98% cov=14,352 • T200A 98% cov=8,629 • Q207A 95% cov=6,646 • R211K 92% cov=6,712 • L228LR L: 59%, R: 39% cov=6,272 • V245E 89% cov=5,618 • D250E 93% cov=5,558 • K277R 90% cov=6,745 • T286A 96% cov=8,230 • I293V 97% cov=9,099 • P294T 94% cov=9,103 • E312D 94% cov=9,158

Nucleoside Reverse Transcriptase Inhibitors	
abacavir (ABC)	Intermediate Resistance
zidovudine (AZT)	Susceptible
stavudine (D4T)	Low-Level Resistance
didanosine (DDI)	Low-Level Resistance
emtricitabine (FTC)	High-Level Resistance
lamivudine (3TC)	High-Level Resistance
tenofovir (TDF)	Low-Level Resistance

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

RT comments

NRTI

- **K70/E/Q/N/T/S/G** cause low-leve resistance to 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.

NNRTI

- **K103N** is a non-polymorphic mutation that confers high-level reductions in NVP and EFV susceptibility. It is the most commonly transmitted DRM.
- **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.

Mutation scoring: RT

HIVDB 9.5.1 (2023-11-05)

Drug resistance mutation scores of NRTI:

Download CSV

Rule	ABC	AZT	D4T	DDI	FTC	3TC	TDF
K70KE	15	0	15	15	10	10	15
M184V	15	-10	-10	10	60	60	-10
K70KE + M184V	0	0	10	0	0	0	10
Total	30	-10	15	25	70	70	15

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
Total	30	105	0	105	0