Drug resistance interpretation: PR

HIVDB 9.5.1 (2023-11-05)

PI Major Mutations: None
PI Accessory Mutations: None
PR Other Mutations: T12A 92% cov=27,411 • I13V 99% cov=27,417 • M36I 98% cov=29,849 • R41K 98% cov=29,785 • K45R 92% cov=29,434 • R57K 93% cov=26,426 • D60E 91% cov=23,400 • I62V 91% cov=23,325 • L63A 92% cov=23,236 • I64V 93% cov=23,250 • I72V 92% cov=24,456

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

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: K65R 95% cov=15,330 • S68N 96% cov=16,136 • M184V 98% cov=19,898
NNRTI Mutations: K103N 97% cov=16,914 • G190A 97% cov=18,395
RT Other Mutations: V35T 98% cov=14,680 • K49R 96% cov=15,113 • V60I 99% cov=15,498 • K102N 96% cov=16,913 • D121Y 97% cov=16,887 • K122E 98% cov=16,884 • D123E 97% cov=16,160 • D177E 98% cov=19,850 • I178M 97% cov=19,852 • Q197E 95% cov=16,792 • T200R 96% cov=16,359 • K201R 96% cov=16,365 • E204K 93% cov=14,750 • Q207E 97% cov=14,674 • R211K 97% cov=15,007 • V245T 95% cov=18,387 • D250E 97% cov=19,603 • Q278H 99% cov=25,766 • L282C 98% cov=25,869 • L283I 97% cov=25,916 • I293V 98% cov=32,025 • T296M 94% cov=31,842 • E297R 96% cov=31,853 • A304E 96% cov=32,984

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

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

RT comments

NRTI

- **K65R** confers intermediate reductions in susceptibility to TDF, ABC, and 3TC/FTC. It increases AZT susceptibility. In NRTI-experienced, INSTI-naive patients with **K65R**, TDF+3TC+DTG is usually highly effective and more effective than AZT/3TC/DTG. However, in patients receiving TDF+3TC+DTG, there is a risk of emergent DTG resistance that does not arise in NRTI-naive patients receiving TDF+3TC+DTG.
- **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.
- **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.

Mutation scoring: RT

HIVDB 9.5.1 (2023-11-05)

Drug resistance mutation scores of NRTI: Download CSV

Rule	ABC	AZT	FTC	3TC	TDF
K65R	45	-10	30	30	50
M184V	15	-10	60	60	-10
K65R + S68N	0	0	0	0	5
Total	60	-20	90	90	45

Drug resistance mutation scores of NNRTI: Download CSV

Rule	DOR	EFV	ETR	NVP	RPV
K103N	0	60	0	60	0
G190A	0	45	10	60	15
Total	0	105	10	120	15