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=38,241 • G16E 98% cov=39,579 • E35D 99% cov=40,491 • M36I 100% cov=40,498 • R41K 99% cov=50,927 • R57K 98% cov=40,962 • L63Q 99% cov=47,527 • H69K 98% cov=46,181 • L89M 99% cov=55,864

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** 99% cov=32,331 • **S68G** 99% cov=32,549 • **M184V** 99% cov=33,288
NNRTI Mutations: **L100I** 98% cov=34,159 • **K103N** 99% cov=33,772
RT Other Mutations: I5V 99% cov=34,188 • V35T 98% cov=27,545 • T39K 99% cov=28,537 • K43E 98% cov=28,675 • K49R 99% cov=28,899 • D121Y 99% cov=32,901 • K122E 99% cov=32,887 • D123E 99% cov=31,724 • T165L 99% cov=32,569 • D177E 99% cov=32,938 • I178M 98% cov=32,857 • T200R 99% cov=33,126 • Q207E 99% cov=29,845 • R211K 99% cov=33,120 • F214L 99% cov=33,258 • V245K 99% cov=29,292 • D250E 99% cov=29,284 • S251N 98% cov=29,290 • K259KR R: 53%, K: 46% cov=25,405 • A272P 99% cov=21,459 • K277R 98% cov=19,805 • L282C 98% cov=18,074 • L283I 99% cov=18,084 • T286N 98% cov=17,893 • A288T 98% cov=17,620 • I293V 98% cov=16,044

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)	Intermediate Resistance
efavirenz (EFV)	High-Level Resistance
etravirine (ETR)	Intermediate Resistance
nevirapine (NVP)	High-Level Resistance
rilpivirine (RPV)	High-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.
- **S68G** is a polymorphic mutation that is often selected in combination with K65R. It partially restores the replication defect associated with K65R.
- **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

- **L100I** is a non-polymorphic mutation that usually occurs in combination with K103N. In this setting it confers high-level resistance to NVP, EFV, and RPV and intermediate resistance to ETR and DOR.
- **K103N** is a non-polymorphic mutation that confers high-level reductions in NVP and EFV susceptibility. It is the most commonly transmitted DRM.

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 + S68G	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
L100I	15	60	30	60	60
L100I + K103N	15	0	0	0	0
K103N	0	60	0	60	0
Total	30	120	30	120	60