Drug resistance interpretation: PR HIVDB 9.5.1 (2023-11-05)

PI Major Mutations: None PI Accessory Mutations: None

PR Other Mutations: L10G • V11F • T12P • I13A • K14G • I15V • G165 • Q18K • L19I • K20\* • T26L • E35D • M36I • N37D • R57K • H69K • L89M

## Protease Inhibitors

Susceptible atazanavir/r (ATV/r) Susceptible darunavir/r (DRV/r) fosamprenavir/r (FPV/r) Susceptible indinavir/r (IDV/r) Susceptible lopinavir/r (LPV/r) Susceptible nelfinavir (NFV) Susceptible Susceptible saguinavir/r (SQV/r) tipranavir/r (TPV/r) Susceptible

#### PR comments

# Other

L10F is a common non-polymorphic, PI-selected accessory mutations. L10R/Y are rare, non-polymorphic, PI-selected mutations. Their effects on PI susceptibility have not been well studied. L10G is a highly unusual mutation at this position.

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 • K70R • M184V

NNRTI Mutations: K103N • V108I • E138Q • M230I

RT Other Mutations: E6K · K11Q · K20R · V35T · V60I · D121Y · K122E · 135T · S162C · 126T · F214S · K219D · K220S · F224T · P225S · P226F · F22TR · L229G · G231\* · Y232A · E233H · A234-237 · K238X · W239\* · T240\* · V241\* · P243S · 244A · V245I · L246C · P247C · E248R · N255M ·

D256I • I257T

High-Level Resistance

#### Nucleoside Reverse Transcriptase Inhibitors

Non-nucleoside Reverse Transcriptase Inhibitors

doravirine (DOR) Low-Level Resistance

Low-Level Resistance
Intermediate Resistance
Low-Level Resistance
High-Level Resistance
rilpivirine (RPV)
Intermediate Resistance

tenofovir (TDF) Susceptible

### RT comments

abacavir (ABC)

zidovudine (AZT)

stavudine (D4T)

didanosine (DDI)

lamivudine (3TC)

emtricitabine (FTC)

## 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.
- 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.
- V108I is a relatively non-polymorphic accessory mutation selected in vitro and/or in vivo with each of the NNRTIs. It appears to contribute to reduced susceptibility to most NNRTIs only in combination with other NNRTI-resistance mutations.
- E138Q/G are non-polymorphic accessory mutations selected by ETR occasionally NVP and EFV. They cause low-level reductions in susceptibility to NVP, RPV, and ETR.
- M230I is a rare mutation selected by RPV. Its effects on NNRTI susceptibility have not been well studied. It also often occurs as a result of APOBEC-mediated G-to-A hypermutation resulting in viruses that are likely to be noninfectious.

### Other

- K219E/Q/N/R are accessory TAMS that usually occur in combination with multiple other TAMs. K219W is an uncommon NRTI-selected mutation. K219D is an unusual mutation at this position.
- 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. P225S is a highly unusual mutation at this position.
- F227L is a non-polymorphic mutation that usually occurs in combination with V106A. It is selected in vivo and in vitro with both NVP and DOR. It is associated with high-level reductions in NVP and DOR. It is associated with high-level reductions in NVP and DOR. F227C is a nonpolymorphic mutation selected in vitro by DOR. F227C is a no
- L234I is a nonpolymorphic mutation selected in persons receiving NVP and EFV. It is also selected in vitro by ETR and DOR. In combination with V106A, it is associated with high-level DOR resistance. Its effect on susceptibility when it occurs alone has not been well characterized. L234del is a highly unusual mutation at this position.
- P236L is a rare mutation selected commonly by DLV, which appears to have little if any effect on current NNRTIs. P236del is a highly unusual mutation at this position.
- This virus is predicted to have intermediate-level reduced susceptibility to RPV. The use of the combination of CAB/RPV should be considered to be contraindicated.

Drug	resistance	mutation	scores

s of NRTI:

Download CSV

Download CSV

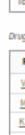
95 25 115 45

HIVDB 9.5.1 (2023-11-05)



Dri	ug re
	Rul
	V10
	M23
	K10:

Total



Rule	DOF	R ÷	EFV ÷	ETR ÷	NVF	÷	RPV ≑
rug resistance mutation scores of NNRTI: Download CSV							
Total	25	35	20	25	60	60	0
M184V	15	-10	-10	10	60	60	-10
K70R	5	30	15	10	0	0	5
D67N	5	15	15	5	0	0	5