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

PI Major Mutations: None PI Accessory Mutations: None

PR Other Mutations: V11X • T12A • I13S • K14S • G16E • E35D • M36I • R41K • H69K • L89M

Protease Inhibitors

Susceptible atazanavir/r (ATV/r) 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

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

No drug resistance mutations were found for Pl.

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

NRTI Mutations: K65R • S68G • Δ69

NNRTI Mutations: Y181C • G190S

RT Other Mutations: E6D • V35T • V60I • K101Q • K122E • D123N • I135T • P170L • K173S • Q174K • D177E • V179I • T200A • Q207A • R211S • K219X • L228S • W229L • M230D • E233D • \(\textit{\textit{\textit{D237}}\) • K238Q • V245E • P247Q • \(\textit{\textit{N25M}}\) • \(\textit{\textit{D25M}}\) • \(\textit{D25M}\) •

Nucleoside Reverse Transcriptase Inhibitors

abacavir (ABC) zidovudine (AZT) Susceptible stavudine (D4T) didanosine (DDI) emtricitabine (FTC) lamivudine (3TC) High-Level Resistance Intermediate Resistance

High-Level 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

tenofovir (TDF)

NRTI

- K65R confers intermediate reductions in susceptibility to TDF, ABC, and 3TC/FTC. It increases AZT susceptibility. In NRTI-experienced, INSTI-naive 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.
- \$686 is a polymorphic mutation that is often selected in combination with K65R. It partially restores the replication defect associated with K65R.
- Amino acid deletions between codons 67 and 70 are rare and usually occur in combination with multiple TAMs, K65R, or the Q151M mutation complex. Deletions at positions 69 and 70 are more often associated with K65R or the Q151M mutation complex. Deletions at codon 68 are extremely rare and less well characterized.

NNRTI

- Y181C is a non-polymorphic mutation selected in persons receiving NVP, ETR and RPV. It confers high-level resistance to NVP, intermediate resistance to ETR and RPV, and low-level resistance to EFV. It does not significantly reduce DOR susceptibility.
- G190S is a non-polymorphic mutation that confers high-level resistance to NVP and EFV. It may also be associated low-levels reductions in DOR susceptibility. It does not appear to be selected by ETR or RPV or to reduce their in vitro susceptibility.

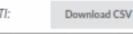
Other

- 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.
- V179I is a polymorphic mutation that is frequently selected in persons receiving ETR and RPV. However, it has little, if any, direct effect on NNRTI susceptibility.
- M230L is an uncommon non-polymorphic mutation selected in persons receiving EFV, NVP, and RPV. It causes intermediate to high-level resistance to each of the NNRTIs. M230l 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.
- L234l 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. P236S is a highly unusual mutation at this position.
- K238T/N are uncommon non-polymorphic mutations selected in persons receiving NVP and EFV usually in combination with K103N. Alone, K238T/N appear to have minimal effects on NNRTI susceptibility. K238Q is a highly unusual mutation at this position.

Drug	resistance	mutatio	n scores o	f NRTI:

Rule	ABC \$	AZT \$	D4T \$	DDI \$	FTC \$	3ТС ≑	TD
K65R	45	-10	60	60	30	30	5
T69del	15	0	30	30	15	15	1
K65R + S68G	0	0	0	0	0	0	
Total	60	-10	90	90	45	45	7





brug resistance mutation scores of Armon.				Download CSV	
Rule	DOR 0	EFV \$	ETR ÷	NVP ÷	RP\
<u>Y181C</u>	10	30	30	60	4
Y181C + G190S	10	0	10	0	1
<u>G190S</u>	20	60	10	60	1
Total	40	90	50	120	7