Drug resistance interpretation: PR

HIVDB 9.5.1 (2023-11-05)

PI Major Mutations: None

PI Accessory Mutations: None

PR Other Mutations: T12TA • I13V • K14KR • E35D • M36I • N37NS • R41K • K45R • R57K • Q61QE • L63P • H69K • L89M

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

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: L74LV • Y115YF • M184MV

NNRTI Mutations: K103KN • Y181C • H221Y

RT Other Mutations: I5IV • E6D • V35T • K49R • E53ED • V60I • K102KQ • D121Y • K122E • I135IV • Q174QR • D177E • I178L • V179I • V189VI • E194D • Q207E • R211K • L228LQ • V245K • D250DE • A272P • I274V • Q278QH • K281KR • L282C • L283I • K512T • E516Q • S519N • Q524K • K527E • K530KQ • A534S • A554S • V559I

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

NRTI

- **L74V** causes intermediate ABC resistance. L74I causes low-level ABC resistance.
- **Y115F** causes intermediate resistance to ABC and low-level resistance to 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.
- **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.
- **H221Y** is a non-polymorphic accessory mutation selected primarily by NVP, RPV, and DOR. It frequently occurs in combination with Y181C.

Other

- **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.

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
L74LV	30	0	0	60	0	0	0
L74LV + M184MV	15	0	0	0	0	0	0
Y115YF	30	0	0	0	0	0	15
Y115YF + M184MV	15	0	0	0	0	0	5
M184MV	15	-10	-10	10	60	60	-10
Total	105	-10	-10	70	60	60	10

Drug resistance mutation scores of NNRTI: Download CSV

Rule	DOR	EFV	ETR	NVP	RPV
K103KN + Y181C	5	0	0	0	0
Y181C	10	30	30	60	45
Y181C + H221Y	10	0	0	0	10
H221Y	10	10	10	15	15
K103KN	0	60	0	60	0
Total	35	100	40	135	70

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

INSTI Major Mutations: None
INSTI Accessory Mutations: None
IN Other Mutations: K14R • S17SN • S24N • K34KR • I72V • I84M • L101I • T112V • I113V • T124A • T125A • K136Q • V201I • T206S • T218S • K219N • N222K • L234I • S283G

Integrase Strand Transfer Inhibitors	
bictegravir (BIC)	Susceptible
cabotegravir (CAB)	Susceptible
dolutegravir (DTG)	Susceptible
elvitegravir (EVG)	Susceptible
raltegravir (RAL)	Susceptible

Mutation scoring: IN — HIVDB 9.5.1 (2023-11-05)

No drug resistance mutations were found for INSTI.