

Drug resistance interpretation: PR

PI Major Mutations:

I54V

100%

from:41,125

•

V82A

100%

from:10,188

PI Accessory Mutations:

L10F

100%

from:40,100

•

L24I

10%

from:10,188

•

L89V

10%

from:10,100

PR Other Mutations:

I13V

100%

from:40,100

•

K20M

10%

from:42,100

•

E35D

10%

from:43,100

•

M36I

100%

from:43,100

•

R41K

100%

from:43,100

•

Q61H

10%

from:43,100

•

L63P

10%

from:47,100

•

A71T

10%

from:47,100

•

T91S

10%

from:48,100

Protease Inhibitors

atazanavir/r (ATV/r)

Intermediate Resistance

darunavir/r (DRV/r)

Potential Low-Level Resistance

lopinavir/r (LPV/r)

High-Level Resistance

PR comments

Major

- I54V is a non-polymorphic PI-selected mutation that contributes reduced susceptibility to each of the PIs except DRV.
- V82A is a non-polymorphic mutation selected primarily by IDV and LPV. It is associated with reduced susceptibility to LPV and to a lesser extent ATV. It increases DRV susceptibility.

Accessory

- L10F is a common non-polymorphic, PI-selected accessory mutation associated with reduced in vitro susceptibility to LPV and DRV.
- L24I is a non-polymorphic mutation selected by IDV and LPV. It contributes reduced susceptibility to ATV and LPV.
- L89V is a nonpolymorphic accessory mutation weakly selected by each of the PIs. It appears to be minimally associated with reduced PI susceptibility. L89T is an uncommon non-polymorphic PI-selected mutation selected primarily by ATV.

Other

- K20M/V are uncommonrelatively non-polymorphic PI-selected mutations that have not been well studied.
- A71V/T are polymorphic, PI-selected accessory mutations that increase the replication of viruses with other PI-resistance mutations.

Mutation scoring: PR

HIVDB 9.5.1 (2023-11-05)

Drug resistance mutation scores of PI:

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Rule	ATV/r	DRV/r	LPV/r
L24I	10	0	10
I54V	15	0	15
I54V + V82A	10	0	10
V82A	15	0	30
L10F	0	5	5
L89V	0	5	0
Total	50	10	70

Drug resistance interpretation: RT

HIVDB 9.5.1 (2023-11-05)

NRTI Mutations:

M41L

10%

from:28,100

•

D67E

10%

from:28,100

•

T69ins

100%

from:28,100

•

V75M

10%

from:28,100

•

L210W

10%

from:10,100

•

T215Y

10%

from:10,100

NNRTI Mutations:

Y181C

10%

from:10,100

RT Other Mutations:

V21I

10%

from:10,100

•

V35T

10%

from:28,100

•

K43Q

10%

from:27,100

•

K49R

10%

from:28,100

•

V60I

10%

from:28,100

•

K64R

10%

from:28,100

•

K122E

10%

from:10,100

•

D177E

10%

from:10,100

•

I178L

10%

from:10,100

•

T200A

10%

from:10,100

•

Q207E

10%

from:10,100

•

R211K

10%

from:10,100

•

D218E

10%

from:10,100

•

L228R

10%

from:10,100

•

D250E

10%

from:10,100

•

A272P

10%

from:10,100

•

K277R

10%

from:10,100

•

L282C

10%

from:10,100

•

L283I

10%

from:10,100

Nucleoside Reverse Transcriptase Inhibitors

abacavir (ABC)

High-Level Resistance

zidovudine (AZT)

High-Level Resistance

emtricitabine (FTC)

Intermediate Resistance

lamivudine (3TC)

Intermediate Resistance

tenofovir (TDF)

High-Level Resistance

Non-nucleoside Reverse Transcriptase Inhibitors

doravirine (DOR)

Potential Low-Level Resistance

efavirenz (EFV)

Intermediate Resistance

etravirine (ETR)

Intermediate Resistance

nevirapine (NVP)

High-Level Resistance

rilpivirine (RPV)

Intermediate Resistance

RT comments

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.
- 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 of NRTI:

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Rule	ABC ⚡	AZT ⚡	FTC ⚡	3TC ⚡	TDF ⚡
<u>M41L</u>	5	15	0	0	5
<u>M41L + D67E + T215Y</u>	5	5	0	0	5
<u>M41L + L210W</u>	10	10	0	0	10
<u>M41L + L210W + T215Y</u>	10	0	15	15	10
<u>M41L + T215Y</u>	10	10	5	5	10
<u>D67E</u>	5	15	0	0	5
<u>T69ins</u>	60	60	30	30	60
<u>L210W</u>	5	15	0	0	5
<u>L210W + T215Y</u>	10	10	0	0	10
<u>T215Y</u>	10	60	0	0	10
<u>V75M</u>	0	10	0	0	0
Total	130	210	50	50	130

Drug resistance mutation scores of NNRTI:

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Rule	DOR ⚡	EFV ⚡	ETR ⚡	NVP ⚡	RPV ⚡
<u>Y181C</u>	10	30	30	60	45