

PI Major Mutations:None

PI Accessory Mutations:None

PR Other Mutations:

L10V100%
from:752

 •

I13V99%
from:1,319

 •

G16GA95%
from:1,685

 •

K20R99%
from:1,814

 •

E33D100%
from:2,399

 •

M36I100%
from:2,395

 •

R41K99%
from:2,021

 •

R57K99%
from:2,037

 •

D60E100%
from:2,278

 •

H69K99%
from:2,312

 •

L89M100%
from:2,321

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

PR comments

Other

- L100V are polymorphic, PI-selected accessory mutations that increase the replication of viruses with other PI-resistance mutations.
- K20R is a highly polymorphic PI-selected accessory mutation that increases replication fitness in viruses with PI-resistance mutations.

No drug resistance mutations were found for PI.

NRTI Mutations:

M41L100%
from:2,382

 •

M184V99%
from:854

 •

L210LW95%
from:1,111

 •

T215Y99%
from:229

NNRTI Mutations:

K103N100%
from:1,264

 •

V108I99%
from:1,264

 •

H221Y100%
from:2,027

RT Other Mutations:

K20R99%
from:2,229

 •

V21VI95%
from:1,491

 •

V35T100%
from:2,404

 •

T39A99%
from:1,982

 •

V60E100%
from:2,012

 •

K102H100%
from:1,264

 •

K122E99%
from:1,277

 •

D123S99%
from:1,263

 •

S162C100%
from:1,264

 •

K173S100%
from:802

 •

Q174K99%
from:802

 •

D177E100%
from:756

 •

D192N99%
from:321

 •

G196E99%
from:302

 •

T200A99%
from:234

 •

E203D99%
from:111

 •

Q207A100%
from:111

 •

R211N99%
from:111

 •

L228R100%
from:99

Nucleoside Reverse Transcriptase Inhibitors		Non-nucleoside Reverse Transcriptase Inhibitors	
abacavir (ABC)	High-Level Resistance	doravirine (DOR)	Low-Level Resistance
zidovudine (AZT)	High-Level Resistance	efavirenz (EFV)	High-Level Resistance
stavudine (D4T)	High-Level Resistance	etravirine (ETR)	Potential Low-Level Resistance
didanosine (DDI)	High-Level Resistance	nevirapine (NVP)	High-Level Resistance
emtricitabine (FTC)	High-Level Resistance	rilpivirine (RPV)	Low-Level Resistance
lamivudine (3TC)	High-Level Resistance		
tenofovir (TDF)	Intermediate Resistance		

RT comments

NRTI

- M41L is a TAM that usually occurs with T215Y. In combination, **M41L** plus T215Y confer intermediate / high-level resistance to AZT and d4T and contribute to reduced ddi, ABC and TDF susceptibility.
- 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.
- L210W is a TAM that usually occurs in combination with M41L and T215Y. The combination of M41, **L210W** and T215Y causes high-level resistance to AZT and intermediate resistance to ABC and TDF.
- T215Y/F are TAMs that causes intermediate/high-level resistance to AZT and potentially low-level resistance to ABC and TDF.

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.
- H221Y is a non-polymorphic accessory mutation selected primarily by NVP, RPV, and DOR. It frequently occurs in combination with Y181C.

- This virus is predicted to have low-level reduced susceptibility to **RPV**. The use of the combination of CAB/**RPV** should be considered to be relatively contraindicated.

Drug resistance mutation scores of NRTI:

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Rule	ABC ÷	AZT ÷	D4T ÷	DDI ÷	FTC ÷	3TC ÷	TDF ÷
M41L	5	15	15	10	0	0	5
M41L + M184V + T215Y	10	0	0	0	0	0	0
M41L + L210LW	10	10	10	10	0	0	10
M41L + L210LW + T215Y	10	0	0	0	15	15	10
M41L + T215Y	10	10	10	10	5	5	10
M184V	15	-10	-10	10	60	60	-10
L210LW	5	15	15	10	0	0	5
L210LW + T215Y	10	10	10	10	0	0	10
T215Y	10	60	40	15	0	0	10
Total	85	110	90	75	80	80	50

Drug resistance mutation scores of NNRTI:

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Rule	DOR ⚡	EFV ⚡	ETR ⚡	NVP ⚡	RPV ⚡
<u>V108I</u>	10	10	0	15	0
<u>H221Y</u>	10	10	10	15	15
<u>K103N</u>	0	60	0	60	0
Total	20	80	10	90	15