

PI Major Mutations:

M46I100%
from 112

PI Accessory Mutations:

L10F100%
from 65 • T74P99%
from 79

PR Other Mutations:

I13V100%
from 63 • K14R97%
from 63 • L19I100%
from 40 • E33D100%
from 23 • M36I100%
from 123 • R41K100%
from 112 • R57K100%
from 16 • H65K99%
from 41

Protease Inhibitors	
atazanavir/r (ATV/r)	Low-Level Resistance
darunavir/r (DRV/r)	Potential Low-Level Resistance
fosamprenavir/r (FPV/r)	Intermediate Resistance
indinavir/r (IDV/r)	Intermediate Resistance
lopinavir/r (LPV/r)	Low-Level Resistance
nelfinavir (NFV)	High-Level Resistance
saquinavir/r (SQV/r)	Low-Level Resistance
tipranavir/r (TPV/r)	Intermediate Resistance

PR comments

Major

- M46I/L are relatively non-polymorphic PI-selected mutations. In combination with other PI-resistance mutations, they are associated with reduced susceptibility to each of the PIs except DRV.

Accessory

- L10F is a common non-polymorphic, PI-selected accessory mutation associated with reduced in vitro susceptibility to LPV and DRV.
- T74P is a nonpolymorphic PI-selected accessory mutation that occurs primarily in viruses from persons who have received multiple PIs. In combination with other mutations, it is associated with reduced susceptibility to ATV and DRV.

Drug resistance mutation scores of PI:

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Rule	ATV/r ⚡	DRV/r ⚡	FPV/r ⚡	IDV/r ⚡	LPV/r ⚡	NFV ⚡	SQV/r ⚡	TPV/r ⚡
M46I	10	0	10	10	10	30	10	5
T74P	10	5	10	10	5	20	10	25
L10F	0	5	15	10	5	15	0	0
Total	20	10	35	30	20	65	20	30

NRTI Mutations:

None

NNRTI Mutations:

None

RT Other Mutations:

K512R100%
from 1,443 • L517I97%
from 1,762 • S519N100%
from 1,132 • Q524K97%
from 4,421 • K327E100%
from 6,793 • E529D99%
from 4,303 • K530R99%
from 4,303 • A534S99%
from 3,012 • A554S99%
from 22,802 • I556V100%
from 22,679 • V559I99%
from 22,698

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

No drug resistance mutations were found for NRTI.

No drug resistance mutations were found for NNRTI.

INSTI Major Mutations:

None

INSTI Accessory Mutations:

None

IN Other Mutations:

V31I99%
from 22,876 • L101I97%
from 1,362 • T112V99%
from 2,627 • I113V100%
from 2,627 • T125A100%
from 2,763 • D167E99%
from 4,186 • Y194C99%
from 11,427 • V201I99%
from 11,219 • T206S99%
from 11,186 • N222K100%
from 11,313 • L234I99%
from 11,857 • A263AV100%
from 11,203 • I268IL100%
from 11,209 • D270DH100%
from 11,207 • S283G100%
from 3,638

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

No drug resistance mutations were found for INSTI.