

Drug resistance interpretation: PR

PI Major Mutations:
PI Accessory Mutations:
PR Other Mutations:

D30N
F53FL

I13V • E35D • M36I • L63P

Protease Inhibitors

atazanavir/r (ATV/r)
darunavir/r (DRV/r)
fosamprenavir/r (FPV/r)
indinavir/r (IDV/r)
lopinavir/r (LPV/r)
nelfinavir (NFV)
saquinavir/r (SQV/r)
tipranavir/r (TPV/r)

Potential Low-Level Resistance
Susceptible
Susceptible
Susceptible
Susceptible
High-Level Resistance
Low-Level Resistance
Susceptible

PR comments

Major

D30N

is a non-polymorphic mutation NFV-selected mutation that causes high-level resistance to NFV but not to other PIs.

Accessory

F53L

is a nonpolymorphic accessory mutation selected primarily by SQV, IDV, ATV and LPV. In combination with other mutations, It is associated with reduced susceptibility to ATV and possibly LPV. F53Y is an uncommon nonpolymorphic accessory PI-selected mutation that has not been well studied.

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	FPV/r	IDV/r	LPV/r	NFV	SQV/r	TPV/r
F53FL	10	0	0	0	0	10	15	0
D30N	0	0	0	0	0	60	0	0
Total	10	0	0	0	0	70	15	0

Drug resistance interpretation: RT

HIVDB 9.5.1 (2023-11-05)

NRTI Mutations:
NNRTI Mutations:
RT Other Mutations:

D67N • K70R • M184V • K219Q

None

K11R • I135IT • T200A • Q207R • R211E • D218E

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

RT comments

NRTI

D67N

is a non-polymorphic TAM associated with low-level resistance to AZT.

K70R

is a TAM that confers intermediate resistance to AZT and contributes to reduced ABC and TDF susceptibility in combination with other TAMs.

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.

K219E/Q/N/R

are accessory TAMs that usually occur in combination with multiple other TAMs.

Mutation scoring: RT

HIVDB 9.5.1 (2023-11-05)

Drug resistance mutation scores of NRTI:

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Rule	ABC	AZT	D4T	DDI	FTC	3TC	TDF
D67N	5	15	15	5	0	0	5
D67N + K70R + M184V + K219Q	10	0	0	0	0	0	0
D67N + K70R + K219Q	10	15	10	10	10	10	10
K70R	5	30	15	10	0	0	5
M184V	15	-10	-10	10	60	60	-10
K219Q	5	10	10	5	0	0	5
Total	50	60	40	40	70	70	15

No drug resistance mutations were found for NNRTI.