

PI Major Mutations:None

PI Accessory Mutations:[K20T](#)

PR Other Mutations:[L10G](#) • [V11N](#) • [T12F](#) • [I13S](#) • [G16C](#) • [G17R](#) • [Q18K](#) • [E35D](#) • [M36I](#) • [R41K](#) • [K45R](#) • [R57K](#) • [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) | Low-Level Resistance |
| saquinavir/r (SQV/r) | Susceptible |
| tipranavir/r (TPV/r) | Susceptible |

PR comments

Accessory

- K20T** is a non-polymorphic accessory PI-selected mutation associated with reduced susceptibility to ATV and LPV.

Other

- L10F is a common non-polymorphic, PI-selected accessory mutation associated with reduced in vitro susceptibility to LPV and DRV. L10I/V are polymorphic, PI-selected accessory mutations that increase the replication of viruses with other PI-resistance mutations. L10R/Y are rare, non-polymorphic PI-selected mutations. Their effects on PI susceptibility have not been well studied. **L10G** is a highly unusual mutation at this position.

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 ⚡ |
|----------------------|---------|---------|---------|---------|---------|-------|---------|---------|
| K20T | 5 | 0 | 5 | 5 | 0 | 15 | 5 | 0 |

NRTI Mutations:[M184V](#)

NNRTI Mutations:[K103N](#)

RT Other Mutations:[P4Q](#) • [K11T](#) • [K20R](#) • [V21I](#) • [E28K](#) • [K32E](#) • [V35T](#) • [T39N](#) • [V60I](#) • [K101A](#) • [K122E](#) • [D123N](#) • [I135T](#) • [K173A](#) • [Q174K](#) • [I195X](#) • [T200A](#) • [Q207E](#) • [R211K](#) • [K219X](#) • [P236S](#) • [D237*](#) • [K238Q](#) • [V245Q](#) • [P247Q](#) • [D250E](#) • [S251C](#) • [T253N](#) • [V254C](#) • [N255H](#) • [L260S](#) • [V261S](#) • [L264I](#) • [N265X](#) • [A267V](#) • [A272P](#) • [I274S](#) • [K275S](#) • [V276K](#) • [K277A](#) • [Q278L](#) • [L279C](#) • [C280R](#) • [K281T](#) • [L283S](#) • [R284D](#) • [G285R](#) • [T286S](#) • [K287L](#) • [A288K](#) • [L289P](#) • [T290L](#) • [E291N](#) • [V292R](#) • [I293M](#)

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

RT comments

NRTI

- **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.

Other

- **K101N/A/T** are uncommon non-polymorphic NNRTI-selected mutation of uncertain phenotypic and clinical significance.
- P236L is a rare mutation selected commonly by DLV, which appears to have little if any effect on current NNRTIs. **P236S** is a highly unusual mutation at this position.
- K238T/N are uncommon non-polymorphic mutations selected in persons receiving NVP and EFV usually in combination with K103N. Alone, K238T/N appear to have minimal effects on NNRTI susceptibility. **K238Q** is a highly unusual mutation at this position.

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 ↕ |
|--------------|-------|-------|-------|-------|-------|-------|-------|
| <u>M184V</u> | 15 | -10 | -10 | 10 | 60 | 60 | -10 |

Drug resistance mutation scores of NNRTI:

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| Rule | DOR ↕ | EFV ↕ | ETR ↕ | NVP ↕ | RPV ↕ |
|--------------|-------|-------|-------|-------|-------|
| <u>K103N</u> | 0 | 60 | 0 | 60 | 0 |