

INSTI Major Mutations:

N155H

INSTI Accessory Mutations:

None

IN Other Mutations:

K14R • V31I • I73V • E92A • T112V • I113V • T124A • T125A • K136Q • V20I • L234I • S283G • D286N

| Integrase Strand Transfer Inhibitors | |
|--------------------------------------|--------------------------------|
| bictegravir (BIC) | Potential Low-Level Resistance |
| cabotegravir (CAB) | Low-Level Resistance |
| dolutegravir (DTG) | Potential Low-Level Resistance |
| elvitegravir (EVG) | High-Level Resistance |
| raltegravir (RAL) | High-Level Resistance |

IN comments

Major

- N155H is a common nonpolymorphic INSTI-resistance mutations. It has been reported in a high proportion of persons developing VF and HIVDR while receiving RAL, EVG, DTG, and CAB. Alone, it reduces RAL and EVG susceptibility about 10 and 30-fold, respectively. It has minimal effect on susceptibility to DTG, BIC, and CAB.

Other

- E92Q is a common non-polymorphic mutation selected in persons receiving RAL and EVG. It reduces RAL susceptibility 5 to 10-fold and EVG susceptibility ~30-fold. It does not reduce susceptibility to BIC, CAB, and DTG. E92G/V are rare nonpolymorphic mutations that reduce EVG susceptibility >=10-fold but do not appear to reduce susceptibility to other INSTIs. E92A is an unusual mutation at this position.
- This virus is predicted to have low-level reduced susceptibility to CAB. The use of the combination of CAB/RPV should be considered to be relatively contraindicated.

Drug resistance mutation scores of INSTI:

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| Rule | BIC ⚡ | CAB ⚡ | DTG ⚡ | EVG ⚡ | RAL ⚡ |
|-------|-------|-------|-------|-------|-------|
| N155H | 10 | 25 | 10 | 60 | 60 |