

INSTI Major Mutations:  
INSTI Accessory Mutations:  
IN Other Mutations:

[N155H](#)  
[D232N](#)  
D6E • E10D • A23S • V31I • L101I • T124A • V151I • K156N • V201I • M273V

| 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.

Accessory

- D232N is a common nonpolymorphic accessory mutation selected in persons receiving RAL and EVG. Alone, it has little effect on INSTI susceptibility.

Other

- V151I is an accessory INSTI selected mutation that occurs in 1% to 3% of viruses from ART-naïve persons depending on subtype. Alone, it appears to have little or no effect on INSTI susceptibility.
- 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 ÷ |
|-----------------------|-------|-------|-------|-------|-------|
| <a href="#">N155H</a> | 10    | 25    | 10    | 60    | 60    |
| <a href="#">D232N</a> | 0     | 0     | 0     | 10    | 10    |
| Total                 | 10    | 25    | 10    | 70    | 70    |