

INSTI Major Mutations: **N155H**

INSTI Accessory Mutations: **T97A** • **D232N**

IN Other Mutations: E11D • V31I • L101I • K111T • I113V • S119T • T124N • T125A • V151I • S195C • A196P • A205T • T218S

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

- T97A** is a polymorphic INSTI-selected mutation that, depending on subtype, occurs in 1% to 3% of viruses from untreated persons. Alone, it has minimal effects on INSTI susceptibility but in combination with other major resistance mutations, it synergistically reduces susceptibility to each of the INSTIs.
- 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-naive 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 ÷
<u>N155H</u>	10	25	10	60	60
<u>T97A</u>	0	0	0	10	10
<u>D232N</u>	0	0	0	10	10
Total	10	25	10	80	80