Drug resistance interpretation: IN

HIVDB 9.5.1 (2023-11-05)

INSTI Major Mutations: Y143R
INSTI Accessory Mutations: T97A
IN Other Mutations: K7R • S17N • V31I • L101I • T112A • T125A • M154I • V201I

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

IN comments

Major

- **Y143C/R/H** are non-polymorphic mutations associated with high-level RAL resistance. Alone, they have minimal effects on EVG susceptibility. However, they are associated with intermediate reductions in EVG susceptibility when they occur in combination with one or more accessory INSTI-resistance mutations. Y143 mutations do not reduce susceptibility to DTG, BIC, or CAB.

Accessory

- **T97A** is a polymorphic INSTI-selected mutation that, depending on subtype, occurs in 1% to 5% 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.
- 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.

Mutation scoring: IN

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Drug resistance mutation scores of INSTI: Download CSV

Rule	BIC	CAB	DTG	EVG	RAL
Y143R	5	10	5	10	60
T97A + Y143R	0	5	0	5	0
T97A	0	0	0	10	10
Total	5	15	5	25	70