Drug resistance interpretation: IN

HIVDB 9.5.1 (2023-11-05)

INSTI Major Mutations: T66TA • N155NH
INSTI Accessory Mutations: H51HY
IN Other Mutations: L101I • T112I • V201VI • K211Q • I217V • K240KR • K266KR

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

IN comments

Major

- **T66A/I** are non-polymorphic mutations selected in persons receiving EVG, RAL, and DTG usually in combination with other INSTI-resistance mutations. They cause moderate reductions in EVG susceptibility but do not appear to reduce susceptibility to other INSTIs.
- **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

- **H51Y** is an uncommon nonpolymorphic accessory mutation selected in vitro by EVG, DTG, and CAB. Alone, it has minimal if any effect on INSTI susceptibility.

- This virus is predicted to have intermediate-level reduced susceptibility to **CAB**. The use of the combination of **CAB**/RPV should be considered to be contraindicated.
- There is evidence for low-level **DTG** resistance. If **DTG** is used, it should be administered twice daily.

Mutation scoring: IN

HIVDB 9.5.1 (2023-11-05)

Drug resistance mutation scores of INSTI: Download CSV

Rule	BIC	CAB	DTG	EVG	RAL
H51HY	10	15	10	15	15
N155NH	10	25	10	60	60
T66TA	0	0	0	60	15
Total	20	40	20	135	90