

HIVDB algV8_7 => algV8_8 Changes

Nine rules were changed in INSTI drug class:

- Added new rule **G140ACS + Q148HKR + G149A**, with scores 10 (BIC), 10 (DTG), 10 (EVG), 10 (RAL).
- Added new rule **G118R + T97A**, with scores 10 (BIC), 10 (DTG), 10 (EVG), 10 (RAL).
- Added new rule **G118R + L74FIM**, with scores 10 (BIC), 10 (DTG), 10 (EVG), 10 (RAL).
- Added new rule **G118R + E138AKT**, with scores 10 (BIC), 10 (DTG), 10 (EVG), 10 (RAL).
- Added new rule **D232N**, with scores 0 (BIC), 0 (DTG), 10 (EVG), 10 (RAL).
- Changed scores of rule **G118R**: 15 to 30 (BIC), 15 to 30 (DTG).
- Changed scores of rule **R263K**: 25 to 30 (DTG).
- Changed rule **L74FM + Y143ACGHRS** to **L74FIM + Y143ACGHRS**.
- Changed rule **L74FM + Q148HKR** to **L74FIM + Q148HKR** and its scores 10 to 15 (DTG), 10 to 15 (EVG), 10 to 15 (RAL).

Thirty-three established mutation patterns were found containing mutation(s) from the changed rules. Among the 33 patterns, 14 were observed with drug resistance score changes, also 6 have their DTG resistance level lifted.

pattern	count	BIC	DTG	EVG	RAL
R263K	17	25	25 => 30	30	25
L74M + T97A + Y143R	8	10	10	30	70
L74M + Y143R	7	10	10	15	60
L74M + G140S + Q148H	5	55	55 => 60	100 => 105	100 => 105
L74M + Q95K + T97A + Y143R	5	10	10	40	80
L74M + T97A + Y143C + S230R	4	25	35	55	90
L74M + T97A + Y143G	3	10	10	30	70
L74M + T97A + Y143R + E157Q	3	10	10	40	80
L74M + T97A + Y143R + G163K	2	10	10	45	85
L74M + T97A + Y143S + S230R	2	25	35	55	90
E157Q + R263K	1	35	35 => 40	40	35
G140S + Q148R + R263K	1	70	70 => 75	120	115
L74M + E138K + G140C + Q148R + E157Q	1	85	85 => 90	140 => 145	140 => 145
L74M + E138T + G140S + Q148H	1	85	85 => 90	130 => 135	130 => 135
L74M + E92Q + Q148R	1	45	45 => 50	130 => 135	100 => 105
L74M + G140A + Q148R	1	55	55 => 60	100 => 105	100 => 105
L74M + G140C + Q148R	1	55	55 => 60	100 => 105	100 => 105
L74M + G140C + Q148R + G163R	1	60	60 => 65	115 => 120	115 => 120
L74M + G140S + Q148R	1	55	55 => 60	100 => 105	100 => 105
L74M + G140S + Q148R + E157Q	1	55	55 => 60	110 => 115	110 => 115

pattern	count	BIC	DTG	EVG	RAL
L74M + Q95K + T97A + Y143C + S230R	1	25	35	65	100
L74M + Q95K + Y143C + S230R	1	25	35	50	90
L74M + T97A + E138A + Y143C	1	20	20	45	85
L74M + T97A + E138K + Y143C + S230R	1	35	45	70	105
L74M + T97A + E138K + Y143R	1	20	20	45	85
L74M + T97A + Y143C + G163R + S230R	1	30	40	75	105
L74M + T97A + Y143G + G163R	1	15	15	50	85
L74M + T97A + Y143H + G163R	1	15	15	50	85
L74M + Y143C	1	10	10	15	60
L74M + Y143C + N155H + S230R	1	35	45	100	140
L74M + Y143R + E157Q	1	10	10	25	70
N155H + R263K	1	35	35 => 40	90	85
T66K + L74M + G140S + Q148R + E157Q	1	70	70 => 75	170 => 175	170 => 175