

NGS-Based HIV Drug Resistance Report

Sequence summary

Query ID: DRR030219_1_val_1_DRR030219_2_val_2_1_hxb2_pol

Sequence includes: PR, RT, IN

Sequence subtype: B

Basic pipeline parameters

Minimum mutation frequency: 0.2

Minimum percentage a base needs to be incorporated into the consensus sequence: 20

Minimum read depth: 1000

Drug Resistance Interpretation: PR

Algorithm version: HIVDB 9.1 (2022-06-02)

PI Major Resistance Mutations: I84V, L90M

PI Accessory Resistance Mutations: None

Other PR Mutations: I13V, K14KR, R41K, K43R, M46I, K55KR, I62IV, L63P, A71V, I72T, G73S, V77I, I93L

Comments

A71V/T are polymorphic, PI-selected accessory mutations that increase the replication of viruses with other PI-resistance mutations.

I84V is a non-polymorphic mutation selected by each of the PIs. It causes high-level resistance to ATV, FPV, IDV, NFV and SQV, intermediate resistance to LPV and TPV, and low-level resistance to DRV.

L90M is a non-polymorphic PI-selected mutation that reduces susceptibility to each of the PIs except TPV and DRV.

Mutation HIVDR Scores: PR

Drug name	HIVDB Score	Drug susceptibility
ATV	130	High-Level Resistance
DRV	15	Low-Level Resistance
FPV	125	High-Level Resistance
IDV	140	High-Level Resistance
LPV	65	High-Level Resistance
NFV	190	High-Level Resistance
SQV	150	High-Level Resistance
TPV	40	Intermediate Resistance

Drug Resistance Interpretation: RT**Algorithm version:** HIVDB 9.1 (2022-06-02)**NNRTI Resistance Mutations:** None**NRTI Resistance Mutations:** M41L, T215Y**Other RT Mutations:** K20R, K49KR, D67ND, T69NTDA, I135T, E169KE, K173E, M184V, E203KE, Q207E, L210WL, Q334L, Y342YF, M357T, A360V, T386I, K390R, A400T, R461K, G490EG, L491S, A554T, K558R**Comments**

K20R is a highly polymorphic PI-selected accessory mutation.

M41L is a TAM that usually occurs with T215Y. In combination, M41L plus T215Y confer intermediate / high-level resistance to AZT and d4T and contribute to reduced ddl, ABC and TDF susceptibility.

T215Y is a TAM that causes intermediate/high-level resistance to AZT and d4T, low-level resistance to ddl, and potentially low-level resistance to ABC and TDF.

Mutation HIVDR Scores: NRTI

Drug name	HIVDB Score	Drug susceptibility
ABC	85	High-Level Resistance
AZT	110	High-Level Resistance
D4T	120	High-Level Resistance
DDI	115	High-Level Resistance
FTC	80	High-Level Resistance
LMV	80	High-Level Resistance
TDF	55	Intermediate Resistance

Mutation HIVDR Scores: NNRTI

Drug name	HIVDB Score	Drug susceptibility
DOR	0	Susceptible
EFV	0	Susceptible
ETR	0	Susceptible
NVP	0	Susceptible
RPV	0	Susceptible

Drug Resistance Interpretation: IN

Algorithm version: HIVDB 9.1 (2022-06-02)

INI Major Resistance Mutations: V32I

INI Accessory Resistance Mutations: None

Other IN Mutations: T112TIAV, V201IV

Comments

V32I is a non-polymorphic PI-selected mutation associated with reduced susceptibility to each of the PIs except SQV. It is included in the Tibotec DRV genotypic susceptibility score.

Mutation HIVDR Scores: INI

Drug name	HIVDB Score	Drug susceptibility
BIC	0	Susceptible
CAB	0	Susceptible
DTG	0	Susceptible
EVG	0	Susceptible
RAL	0	Susceptible

References

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