

Table S2. Fold change of kinetic parameters for DNA-dependent polymerization in various HIV-1 reverse transcriptase mutants, relative to wildtype RT

	M184V		K65R		K65R/M184V		Q151M		ref.
	K_D	k_{pol}	K_D	k_{pol}	K_D	k_{pol}	K_D	k_{pol}	
dATP	2.4	0.66	0.93	0.23	4.9	0.4	2	1	[1–4]
dTTP	3.5	1.08	0.57	0.33	1.76	0.77	0.82	1.13	[1, 2, 4, 5]
dCTP	2.66	1.3	1.5	0.62	2.4	0.78	1.5	1.2	[1–4, 6]
dGTP	1.75	1.5	1.65	0.37	4.7	1.1	0.52	1.1	[1, 7–10]
	K_D	k_{term}	K_D	k_{term}	K_D	k_{term}	K_D	k_{term}	ref.
3TC-TP	35	0.55	0.77	0.081	17.9	0.035	0.23	0.32	[1, 6]
TFV-DP ^b	1.3	0.98	0.78	0.046	2.87	0.14	1.6	0.34	[1, 3]
CBV-TP [§]	2.43	0.45	-	-	-	-	0.07	0.11	[8]
FTC-TP	-	-	1.59	0.128	1	0.016	0.32	0.42	[6]
ddATP	-	-	1.4	0.11	-	-	-	-	[1, 2]
AZT-TP	-	-	-	-	-	-	-	-	-
D4T-TP [‡]	12.6	1.86	-	-	-	-	-	-	[5]

$r_{exc}(wt)$ was set to the value of 0.0016 [1/s] in resting CD4⁺ T-cells for thymidine- and adenosine analogs respectively, see Table S3 (supplementary material) and eq. (18) (main article) and to the value of 0.00053 [1/s] for guanine- and cytosine analogs, see [8]. ^b excision of TFV-TP from terminated templates was assumed to be 100%, 50%, 100% and 40% of the wild type excision rate for the M184V, the K65R, the Q151M and the K65R/M184V mutant, see [11]. [§] CBV-TP excision in the Q151M mutant was set to 5300% of wild type excision, see [8]. D4T-TP excision in the M184V mutant was set to 83% of the wild type excision, assuming a similar effect of M184V on D4T-TP and AZT-TP [11]. If no other information was available, excisions of nucleoside analogs in the mutant enzymes were assumed to be equal to the wild type excision rate.

Table S2. (continued)

	Q151Mc*		Q151Mc/K70Q		4-TAM**		4-TAM(RNA)		
	K_D	k_{pol}	K_D	k_{pol}	K_D	k_{pol}	K_D	k_{pol}	ref.
dATP	3.7	2.41	1.92	2.3	1 [†]	1 [†]	1 [†]	1 [†]	[4, 12]
dTTP	0.57	0.58	0.57 [‡]	0.58 [‡]	0.53	0.24	1.6	0.72	[4, 13]
dCTP	0.82	1.1	0.82 [‡]	1.1 [‡]	1 [†]	1 [†]	1 [†]	1 [†]	[4]
dGTP	4.1	3.8	4.1 [‡]	3.8 [‡]	0.79	1.15	2.83	1.8	[7, 10]
	K_D	k_{term}	K_D	k_{term}	K_D	k_{term}	K_D	k_{term}	ref.
3TC-TP	-	-	-	-	-	-	-	-	-
TFV-DP	2.3	0.46	4.7	0.36	-	-	-	-	[12]
CBV-TP	-	-	-	-	-	-	-	-	-
FTC-TP	-	-	-	-	-	-	-	-	-
ddATP	-	-	-	-	-	-	-	-	-
AZT-TP	-	-	-	-	3.5	2.57	2.46	0.67	[13]
D4T-TP	-	-	-	-	-	-	-	-	-

* Q151Mc denotes the 'A62V/V75I/F77L/F116Y/Q151M' mutant. ** 4-TAM denotes the 'D67N/K70R/T215Y/K219Q' mutant. [†] set to the value of 1, because of insufficient information. [‡] set equal to the rate in Q151Mc.

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