

Sauerbrei A, Bohn-Wippert K, Kaspar M, Krumbholz A, Karrasch M, Zell R. 2015. Database on natural polymorphisms and resistance-related non-synonymous mutations in thymidine kinase and DNA polymerase genes of herpes simplex virus types 1 and 2. J Antimicrob Chemother 71:6-16, doi: 10.1093/jac/dkv285, PMID: 26433780

Supplementary Table 8: Resistance-associated aa changes in DNA pol gene of HSV-2 including nt changes, their location, antivirals tested as well as results, methods for phenotypic testing and references.

Amino acid change	Nucleotide change	Domain	Antivirals tested		Drug susceptibility (EC ₅₀ ratio of resistant to sensitive viral isolate or EC ₅₀ value)					Test methods for phenotype	References
			resistant	sensitive	Aciclovir (ACV)	Brivudin (BVDU)	Penciclovir (PCV)	Foscarnet (FOS)	Cidofovir (CDV)		
E250Q	G748C	non-conserved region (NH2-terminal domain)	ACV	FOS	EC ₅₀ 44.0 µM	not tested	not tested	EC ₅₀ <660.0 µM	not tested	plaque reduction assay	14670581
D307N	G919A	non-conserved region (NH2-terminal domain)	ACV	FOS	EC ₅₀ 9.0 µM	not tested	not tested	EC ₅₀ 85.1 µM	not tested	plaque reduction assay	24075863
insertion (ED) aa 684-685	insertion (GAAAGAC) nt 2050-2055	non-conserved region	ACV	FOS	EC ₅₀ 16.7 µM	not tested	not tested	not given	not tested	modified dye uptake assay including formazan test	26338148
A724T	G2170A	conserved region II (palm domain)	FOS, CDV	ACV	EC ₅₀ 2.7 µM	not tested	not tested	EC ₅₀ 238.6 µM	EC ₅₀ 20.7 µM	plaque reduction assay	10395866
A724V	C2171T	conserved region II (palm domain)	ACV	FOS	EC ₅₀ 24.0 µM	not tested	not tested	EC ₅₀ 92.0 µM	not tested	plaque reduction assay	20733037
S725G	A2173G	conserved region II (palm domain)	FOS	-	not tested	not tested	not tested	not given	not tested	plaque reduction assay	12367650
S729N	G2186A	conserved region II (palm domain)	FOS, CDV	ACV	EC ₅₀ 8.4 µM	not tested	not tested	EC ₅₀ 451.1 µM	EC ₅₀ 94.3 µM	plaque reduction assay	10395866
Q732R	C2194A	conserved region II (palm domain)	ACV, FOS	-	EC ₅₀ >50.0 µM	not tested	not tested	EC ₅₀ >330.0 µM	not tested	plaque reduction assay	24075863
L783M	C2347A	conserved region VI (fingers domain)	FOS, CDV	CDV	EC ₅₀ 2.2 µM	not tested	not tested	EC ₅₀ 538.6 µM	EC ₅₀ 128.8 µM	plaque reduction assay	10395866
D785N	G2353A	conserved region VI (fingers domain)	FOS, CDV	ACV	EC ₅₀ 4.4 µM	not tested	not tested	EC ₅₀ 280.8 µM	EC ₅₀ 46.2 µM	plaque reduction assay	10395866
Q829R	C2485A	conserved region III (palm domain)	ACV	FOS	EC ₅₀ 9.1 µM	not tested	not tested	EC ₅₀ 71.0 µM	not tested	plaque reduction assay	24075863
L850I	C2548A	non-conserved region (palm domain)	FOS, CDV	ACV	EC ₅₀ 2.6 µM	not tested	not tested	EC ₅₀ 698.9 µM	EC ₅₀ 19.2 µM	plaque reduction assay	10395866
M910T	T2729C	non-conserved region (palm domain)	ACV	FOS	EC ₅₀ >35.2 µM	not tested	not tested	not given	not tested	modified dye uptake assay including formazan test	26338148
D912N	G2734A	non-conserved region (palm domain)	ACV	FOS	EC ₅₀ 443.8 µM	not tested	not tested	EC ₅₀ <660.0 µM	not tested	plaque reduction assay	14670581 10817703
D912V	A2735T	non-conserved region (palm domain)	ACV, FOS	CDV	EC ₅₀ 298.3 µM	not tested	not tested	EC ₅₀ 415.1 µM	EC ₅₀ 13.7 µM	plaque reduction assay	10395866
A915V	C2744T	non-conserved region (palm domain)	ACV	FOS	EC ₅₀ >50.0 µM	not tested	not tested	EC ₅₀ 214.5 µM	not tested	plaque reduction assay	24075863