

**Table S1.** Support for the molecular clock in ZEBOV. The single rate model (SR), representing a clock that ignores sampling dates, can be rejected in favour of the model allowing different rates for each branch (DR), whereas the single rate model with dated tips (SRDT) cannot be rejected.

Model	ln L	K <sup>a</sup>	$\Delta$	d.f.	$\chi^2$
DR	-3283.87	23	–	–	–
SR	-3315.12	12	31.26	11	$P = 0.001$
SRDT	-3300.94	13	17.07	10	$P = 0.073$

a = Number of estimated parameters