Distribution bias and biochemical characterization of *TOP1MT* single nucleotide variants

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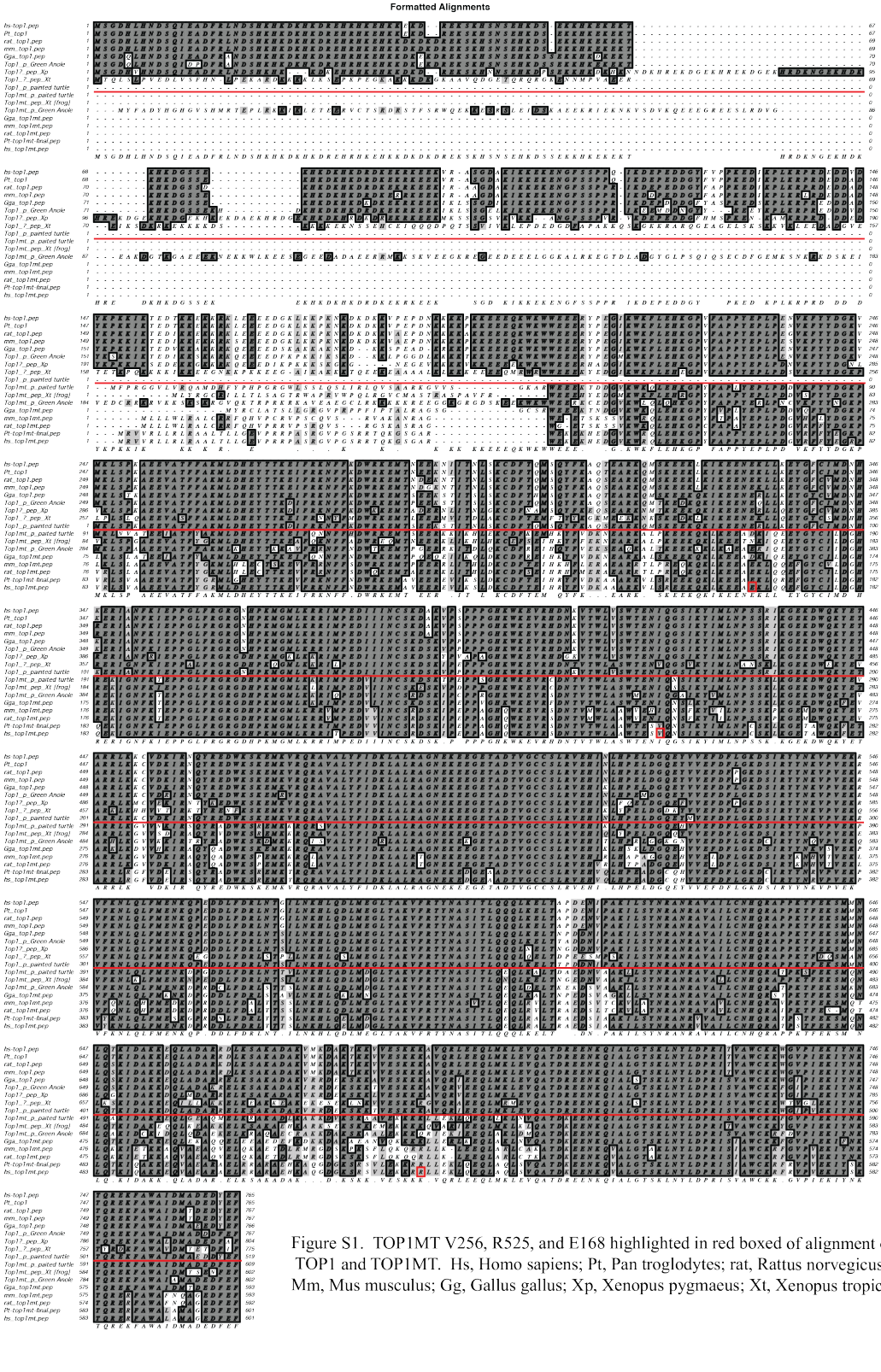

Figure S1. TOP1MT V256, R525, and E168 highlighted in red boxed of alignment of TOP1 and TOP1MT. Hs, Homo sapiens; Pt, Pan troglodytes; rat, Rattus norvegicus; Mm, Mus musculus; Gg, Gallus gallus; Xp, Xenopus pygmaeus; Xt, Xenopus tropicalis.

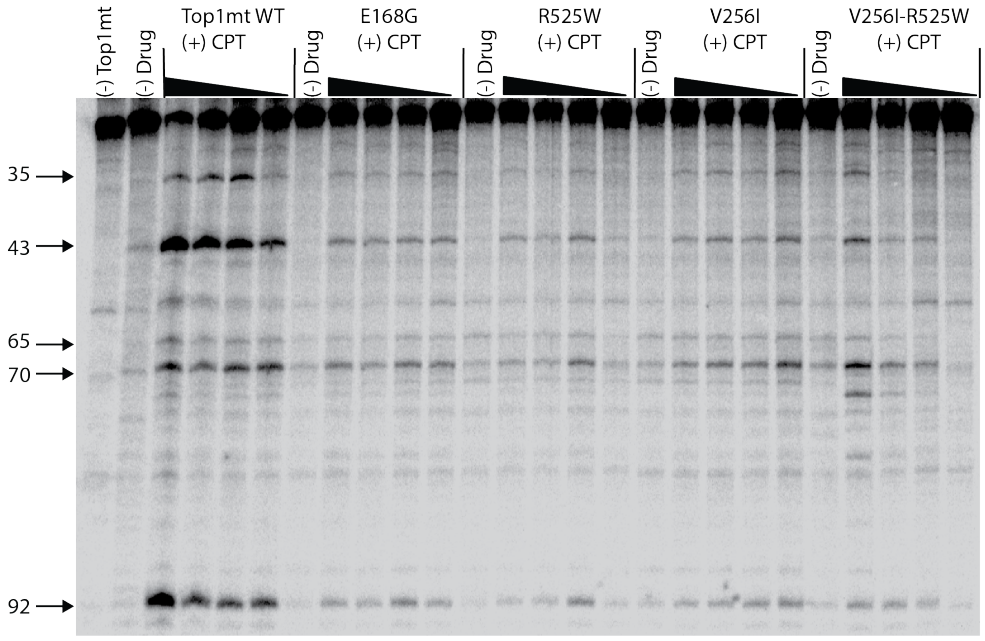

Figure S2. Cleavage assay of purified Top1mt mutant proteins: (lane 1) DNA alone; (lane 2) Top1mt alone; (lane 3-6) 1:3 fold serial dilution of Top1mt incubated with 1 μM camptothecin; (lane 7) E168G Top1mt alone; (lanes 8-11) 1:3 fold serial dilution of E168G Top1mt incubated with 1 μM camptothecin; (lane 12) R525W Top1mt alone; (lane 13-16) 1:3 fold serial dilution of R525W Top1mt incubated with 1 μM camptothecin; (lane 17) V256I Top1mt alone; (lane 18-21) 1:3 fold serial dilution of V256I Top1mt incubated with 1 μM camptothecin; (lane 22) R525W-V256I Top1mt alone; (lane 23-26)) 1:3 fold serial dilution of R525W-V256I Top1mt incubated with 1 μM camptothecin.