TABLE 1 *Escherichia coli* replisome components and associated functions[a]

Replisome component [stoichiometry[b,d]]	Gene	Mol. wt. (kDa)	Function
Pol III holoenzyme[c]		791.5[c]	Dimeric, ATP-dependent, processive polymerase/clamp loader[c]
Pol III star[c]		629.1[c]	Dimeric polymerase/clamp loader[c]
Core[c]		166.0[c]	Monomeric polymerase/exonuclease[c]
α [2]	*dnaE*	129.9	DNA polymerase
ε [2]	*dnaQ*	27.5	3′-5′ Exonuclease
θ [2]	*holE*	8.6	Stimulates ε exonuclease
γ/τ complex[c]		297.1[c]	ATP-dependent clamp loader[c]
γ/τ [1/2]	*dnaX*	47.5/ 71.1	ATPase, τ organizes Pol III star and binds DnaB
δ [1]	*holA*	38.7	Binds β clamp
δ′ [1]	*holB*	36.9	Stator, stimulates γ ATPase in ATP site 1
χ [1]	*holC*	16.6	Binds SSB
ψ [1]	*holD*	15.2	Connects χ to clamp loader
β [2 dimers]	*dnaN*	40.6	Homodimeric processivity sliding clamp[c]
Primase [1]	*dnaG*	65.6	Generates RNA primers for Pol III holoenzyme
DnaB helicase [6]	*dnaB*	52.4	Unwinds duplex DNA 5′-3′ ahead of the replication fork[c]
SSB [4]	*ssb*	18.8	Melts secondary structure in ssDNA, binds clamp loader through χ[c]

[a]Abbreviations include SSB, single-stranded DNA-binding protein, and ssDNA, single-stranded DNA

[b]Refers to the stoichiometry in the holoenzyme and replisome

[c]Refers to a protein complex

[d]Colored boxes indicate a hierarchy of Pol III subassemblies that together comprise the holoenzyme