

List of the PolB sequences used in this study. IDs are displayed as retrieved in NRDB, RefSeq and KEGG databases. Selected sequences used in the reference multiple sequence alignment are displayed in bold.

IDs	Species	Annotation
AAA58439	<i>Homo sapiens</i>	DNA polymerase-delta catalytic-subunit
AAC62689	<i>Cenarchaeum symbiosum</i>	archael family B DNA polymerase
AAG09402	<i>Homo sapiens</i>	DNA polymerase zeta catalytic subunit variant 1
AAK14825	<i>Plasmodium falciparum</i>	DNA polymerase alpha
AAR26842	<i>Feldmannia irregularis virus a</i>	FirrV-1-A18
AAZ32459	uncultured euryarchaeote Alv-FOS1	DNA polymerase family B
ABU2317	<i>Pyramimonas orientalis virus</i>	putative B family DNA polymerase I
ABU2318	<i>Phaeocystis pouchetii virus</i>	putative B family DNA polymerase I
ABU23716	<i>Chrysochromulina ericina virus</i>	putative B family DNA polymerase I
BAA35142	<i>Paramecium bursaria</i> Chlorella virus CVK2	DNA polymerase
BAE06251	<i>Heterosigma akashiwo virus 01</i>	B-family DNA polymerase
BAE19749	Human herpesvirus 1	DNA polymerase UL30
CAC84471	<i>Heliothis virescens ascovirus 3c</i>	delta DNA polymerase
CM1176C *	<i>Cyanidioschyzon merolae</i>	DNA polymerase alpha, subunit A
CMQ098C * #	<i>Cyanidioschyzon merolae</i>	DNA polymerase epsilon, subunit A
CMR103C *	<i>Cyanidioschyzon merolae</i>	DNA polymerase zeta subunit
NP_006222 #	<i>Homo sapiens</i>	DNA polymerase epsilon catalytic subunit
NP_039988	Human herpesvirus 5 strain AD169	UL54
NP_041148 #	Ictalurid herpesvirus 1	ORF57
NP_042094	Variola virus	hypothetical protein VARVgp050
NP_042783	African swine fever virus	DNA polymerase
NP_043990	Molluscum contagiosum virus	MC039L
NP_048107	<i>Melanoplus sanguinipes</i> entomopoxvirus	ORF MSV036 putative DNA polymerase
NP_048532	<i>Paramecium bursaria</i> Chlorella virus 1	hypothetical protein PBCV1_A185R

NP_049662	Enterobacteria phage T4	gp43 DNA polymerase
NP_051748	Myxoma virus	m34L
NP_058633	<i>Homo sapiens</i>	DNA polymerase alpha catalytic subunit
NP_064832	<i>Amsacta moorei</i> entomopoxvirus 'L'	DNA-directed DNA polymerase
NP_069333	<i>Archaeoglobus fulgidus</i> DSM 4304	DNA polymerase B1 (polB)
NP_073424	Yaba-like disease virus	39L protein
NP_077578	<i>Ectocarpus siliculosus</i> virus 1	EsV-1-93
NP_146963	<i>Aeropyrum pernix</i> K1	family B DNA polymerase I
NP_148383	<i>Aeropyrum pernix</i> K1	family B DNA polymerase II
NP_148473	<i>Aeropyrum pernix</i> K1	DNA polymerase II
NP_148895	<i>Cydia pomonella</i> granulovirus	ORF111 DNAPOL
NP_149500	Invertebrate iridescent virus 6	037L
NP_203396	<i>Culex nigripalpus</i> NPV	CUN091 putative dnapolymerase, similar to AcMNPV ORF65
NP_279569	Halobacterium sp. NRC-1	DNA polymerase B1
NP_342079	<i>Sulfolobus solfataricus</i> P2	DNA polymerase II
NP_342896	<i>Sulfolobus solfataricus</i> P2	DNA polymerase II (DNA polymerase B2) carboxy-end (dpo2)
NP_378066	<i>Sulfolobus tokodaii</i> str. 7	DNA polymerase II
NP_393928	<i>Thermoplasma acidophilum</i> DSM 1728	DNA polymerase II
NP_394366	<i>Thermoplasma acidophilum</i> DSM 1728	DNA polymerase II
NP_478036 #	Shrimp white spot syndrome virus	wsv514
NP_542554	Halorubrum phage HF2	putative DNA-dependent DNA polymerase
NP_559083	<i>Pyrobaculum aerophilum</i> str. IM2	possible DNA-directed DNA polymerase (B2)
NP_559770	<i>Pyrobaculum aerophilum</i> str. IM2	DNA polymerase II
NP_559825	<i>Pyrobaculum aerophilum</i> str. IM2	DNA polymerase II
NP_570196	Swinepox virus	SPV036 DNA polymerase
NP_577941	<i>Pyrococcus furiosus</i> DSM 3638	DNA-directed DNA polymerase
NP_586236 #	<i>Encephalitozoon cuniculi</i> GB-M1	DNA polymerase epsilon

NP_597442	<i>Encephalitozoon cuniculi</i> GB-M1	DNA-directed DNA polymerase alpha
NP_612241	Infectious spleen and kidney necrosis virus	putative DNA polymerase
NP_614322	<i>Methanopyrus kandleri</i> AV19	B family DNA polymerase
NP_615844	<i>Methanosarcina acetivorans</i> C2A	DNA-directed DNA polymerase
NP_663155 #	<i>Chlorobium tepidum</i> TLS	DNA polymerase family B protein
NP_690550 #	<i>Heliothis zea</i> virus 1	DNA polymerase I
NP_835679	Rhodothermus phage RM378	similar to DNA-directed DNA polymerase
NP_899330	Vibrio phage KVP40	DNA polymerase
NP_943895	Aeromonas phage Aeh1	DNA polymerase
NP_954286 #	<i>Geobacter sulfurreducens</i> PCA	DNA polymerase II, putative
NP_955144	Canarypox virus	CNPV121 DNA polymerase
P30320	<i>Paramecium bursaria</i> Chlorella virus NY2A	DNA polymerase
P56689	<i>Thermococcus gorgonarius</i>	DNA polymerase (TO POL)
XP_001011832	<i>Tetrahymena thermophila</i> SB210	DNA polymerase family B containing protein
XP_001013747	<i>Tetrahymena thermophila</i> SB210	DNA polymerase catalytic subunit
XP_001017761	<i>Tetrahymena thermophila</i> SB210	DNA polymerase family B containing protein
XP_001032353	<i>Tetrahymena thermophila</i> SB210	DNA polymerase family B containing protein
XP_001301333 #	<i>Trichomonas vaginalis</i> G3	hypothetical protein TVAG_050650
XP_001303643	<i>Trichomonas vaginalis</i> G3	DNA polymerase family B containing protein
XP_001306852	<i>Trichomonas vaginalis</i> G3	polymerase alpha subunit, putative
XP_001326973	<i>Trichomonas vaginalis</i> G3	polymerase zeta subunit, putative
XP_001347646	<i>Plasmodium falciparum</i> 3D7	DNA polymerase zeta catalytic subunit, putative
XP_001683479	<i>Leishmania major</i> strain Friedlin	DNA polymerase zeta catalytic subunit, putative
XP_001685930	<i>Leishmania major</i> strain Friedlin	DNA polymerase delta catalytic subunit, putative
XP_001707891	<i>Giardia lamblia</i>	DNA polymerase delta, catalytic subunit
XP_626972	<i>Cryptosporidium parvum</i> Iowa II	DNA polymerase alpha catalytic subunit

XP_627031 #	<i>Cryptosporidium parvum</i> Iowa II	DNA polymerase epsilon catalytic subunit
XP_638283	<i>Dictyostelium discoideum</i> AX4	DNA polymerase delta catalytic subunit
XP_639211 #	<i>Dictyostelium discoideum</i> AX4	putative DNA polymerase epsilon subunit A
XP_640277	<i>Dictyostelium discoideum</i> AX4	DNA polymerase alpha catalytic subunit
XP_645553	<i>Dictyostelium discoideum</i> AX4	DNA polymerase zeta catalytic subunit
XP_654477	<i>Entamoeba histolytica</i> HM-1	DNA polymerase delta catalytic subunit
XP_656768	<i>Entamoeba histolytica</i> HM-1	DNA polymerase zeta catalytic subunit
XP_657373	<i>Entamoeba histolytica</i> HM-1	DNA polymerase alpha catalytic subunit
XP_763220	<i>Theileria parva</i> strain Muguga	DNA polymerase alpha
XP_843543 #	<i>Leishmania major</i> strain Friedlin	DNA polymerase epsilon catalytic subunit, putative
XP_847160	<i>Trypanosoma brucei</i> TREU927	DNA polymerase zeta catalytic subunit, putative
XP_847318	<i>Trypanosoma brucei</i> TREU927	DNA polymerase alpha catalytic subunit
XP_951513	<i>Trypanosoma brucei</i> TREU927	DNA polymerase delta catalytic subunit
XP_955596	<i>Encephalitozoon cuniculi</i> GB-M1	DNA polymerase delta catalytic subunit
XP_966285 #	<i>Plasmodium falciparum</i> 3D7	DNA polymerase epsilon, catalytic subunit a, putative
YP_001055588	<i>Pyrobaculum calidifontis</i> JCM 11548	DNA polymerase B region
YP_001097770	<i>Methanococcus maripaludis</i> C5	DNA polymerase Pol2
YP_001129537 #	<i>Prosthecochloris vibrioformis</i> DSM 265	DNA polymerase B region
YP_003817	<i>Ambystoma tigrinum</i> virus	DNA polymerase
YP_024639 #	<i>Ostreid herpesvirus 1</i>	ORF100
YP_025135	<i>Neodiprion sertifer</i> NPV	DNA polymerase
YP_073706	Lymphocystis disease virus - isolate China	DNA polymerase elongation subunit family B
YP_136425	<i>Haloarcula marismortui</i> ATCC 43049	DNA polymerase B elongation subunit
YP_142676	<i>Acanthamoeba polyphaga</i> mimivirus	DNA polymerase (B family)
YP_195168	Cyanophage phage S-PM2	DNA polymerase gp43
YP_214414	Cyanophage P-SSM2	T4-like DNA polymerase
YP_214707	Cyanophage P-SSM4	gp43

YP_293784	<i>Emiliana huxleyi</i> virus 86	putative DNA polymerase delta catalytic subunit
YP_320359 #	<i>Anabaena variabilis</i>	DNA polymerase I-like
YP_401712	Human herpesvirus 4 type 1	BALF5
YP_502623	<i>Methanospirillum hungatei</i> JF-1	DNA polymerase B region
YP_656618 #	Ranid herpesvirus 2	DNA polymerase subunit catalytic subunit
YP_656727 #	Ranid herpesvirus 1	ORF72
YP_684489	uncultured methanogenic archaeon RC-I	DNA-directed DNA polymerase B
YP_687101	uncultured methanogenic archaeon RC-I	putative DNA-directed DNA polymerase B
YP_717843	Phage Syn9	gp176
YP_751308	<i>Shewanella frigidimarina</i> NCIMB 400	DNA polymerase B region
YP_762356	<i>Spodoptera frugiperda</i> ascovirus 1a	125.8 kDa Delta DNA Polymerase
YP_803224	<i>Trichoplusia ni</i> ascovirus 2c	DNA polymerase
YP_843812	<i>Methanosaeta thermophila</i> PT	DNA polymerase Pol2
YP_856637	<i>Aeromonas hydrophila</i> subsp. hydrophila ATCC 7966	DNA polymerase II
ZP_00923866	<i>Escherichia coli</i> 101-1	COG0417: DNA polymerase elongation subunit (family B)

(*) KEGG ID; (#) Sequences not included in the complete reference set.