

Recombinant Human Thymine-DNA Glycosylase, His-tagged

Cat. No. TDG-7134H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human TDG protein, fused to His-tag at N-terminus, was expressed in E. coli. MW: 48.4 kDa.
Species	Human
Source	E.coli
ProteinLength	1-410aa
Description	Thymine-DNA glycosylase, also known as TDG, belongs to the TDG/mug DNA glycosylase family. TDG is a nuclear protein which corrects G/T mismatches to G/C pairs by hydrolyzing the carbon-nitrogen bond between the sugar-phosphate backbone of the DNA and the mispaired thymine. TDG can also remove uracil and 5-bromouracil from mispairings with guanine. This enzyme plays a central role in cellular defense against genetic mutation caused by the spontaneous deamination of 5-methylcytosine and cytosine.
Form	Liquid. In 20mM Tris-HCl buffer (pH 8.0) containing 0.4 Urea, 10% glycerol, 0.1M NaCl
Molecular Mass	48.4 kDa (433aa)
AA Sequence	MGSSHHHHHH SSGLVPRGSH MGSMEAENAG SYSLQQAQAF YTFPFQQLMA EAPNMAVVNE QQMPPEVPAP APAQEPVQEA PKGRKRKPRT TEPKQPVEPK KPVESKKS GK SAKSKEKQEK ITDTFKVKRK VDRFNGVSEA ELLTKTLPDI

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LTFNLDIVII GINPGLMAAY KGHHPGPGN HFWKCLFMSG LSEVQLNHMD
DHTLPGKYGI GFTNMVERTT PGSKDLSSKE FREGGRILVQ KLQKYQPRIA
VFNGKCIYEI FSKEVFGVKV KNLEFGLQPH KIPDTETLCY GMPSSSARCA
QFPRAQDKVH YYIKLKDLRD QLKGIERNMD VQEVQYTFDL QLAQEDAKKM
AVKEEKYDPG YEAAYGGAYG ENPCSSEPCG FSSNGLIESV ELRGESAFSG
IPNGQWMTQS FTDQIPSFNS HCGTQEQQEE SHA

Purity >90% by SDS - PAGE

Applications SDS-PAGE

Storage Can be stored at 4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.

Concentration 0.5 mg/ml (determined by Bradford assay)

GENE INFORMATION

Gene Name TDG thymine-DNA glycosylase [Homo sapiens]

Official Symbol TDG

Synonyms TDG; thymine-DNA glycosylase; G/T mismatch-specific thymine DNA glycosylase; EC 3.2.2.29

Gene ID 6996

mRNA Refseq NM_003211

Protein Refseq NP_003202

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MIM	601423
UniProt ID	Q13569
Chromosome Location	12q24.1
Pathway	Base excision repair, conserved biosystem; Depyrimidination, organism-specific biosystem; Fluoropyrimidine Activity, organism-specific biosystem; Base excision repair, organism-specific biosystem; Base-Excision Repair, AP Site Formation, organism-specific biosyst
Function	damaged DNA binding; mismatched DNA binding; protein binding; pyrimidine-specific mismatch base pair DNA N-glycosylase activity

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