
Product Data Sheet

Product Name: TDG Human
 Cat. No.: GP22285
 Batch No.: 1

Product Data

Purity	>98%	Source	E.coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Thymine-DNA Glycosylase; G/T Mismatch-Specific Thymine DNA Glycosylase; EC 3.2.2.29.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MGSMEAENAG SYSLQQAQAF YTFPFQQLMA EAPNMAVVNE QQMPEEVPAP APAQEPVQEA PKGRKRKPRT TEPKQPVEPK KPVESKKSGK SAKSKEKQEK ITDTFKVKRK VDRFNGVSEA ELLTKTLPDI LTFNLDIVII GINPGLMAAY KGHYHPGPGN 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.		
Formulation	The TDG solution (0.5mg/1ml) contains 20mM Tris-HCl buffer (pH 8.0), 0.1M NaCl, 0.4M Urea and 10% glycerol.		

Introduction

Thymine-DNA glycosylase (TDG) is a member of the TDG/mug DNA glycosylase family. TDG is a nuclear protein that fixes 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. In addition, TDG removes uracil and 5-bromouracil from mispairings with guanine. The TDG enzyme has an essential role in cellular defense against genetic mutation triggered by the spontaneous deamination of 5-methylcytosine and cytosine.

Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1%

Caution: Product has not been fully validated for medical applications. For research use only.

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HSA or BSA). Avoid multiple freeze-thaw cycles.

Background

TDG Human Recombinant produced in E. coli is a single polypeptide chain containing 433 amino acids (1-410) and having a molecular mass of 48.4 kDa. TDG is fused to a 23 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

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