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Catalog #:ENPS-656

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## **TDG Human**

Description: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 & Durified by proprietary chromatographic techniques.

Synonyms: Thymine-DNA Glycosylase, G/T Mismatch-Specific Thymine DNA Glycosylase, EC 3.2.2.29.

Source: E.coli.

Physical Appearance: Sterile Filtered colorless solution.

Amino Acid Sequence: MGSSHHHHHH SSGLVPRGSH MGSMEAENAG SYSLQQAQAF YTFPFQQLMA EAPNMAVVNE QQMPEEVPAP APAQEPVQEA PKGRKRKPRT TEPKQPVEPK KPVESKKSGK SAKSKEKQEK ITDTFKVKRK VDRFNGVSEA ELLTKTLPDI LTFNLDIVII GINPGLMAAY KGHHYPGPGN HFWKCLFMSG LSEVQLNHMD DHTLPGKYGI GFTNMVERTT PGSKDLSSKE FR

Purity: Greater than 90% as determined by SDS-PAGE.

#### Formulation:

The TDG solution (0.5mg/1ml) contains 20mM Tris-HCl buffer (pH 8.0), 0.1M NaCl, 0.4M Urea and 10% glycerol.

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

## Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

### Introduction:

Thymine-DNA glycosylase (TDG) is a member of the TDG/mµg 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 sµgar-phosphate backbone of the DNA and the mispaired thymin. 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.

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