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### Recombinant E.coli mug protein

Catalog Number: ATGP2057

#### **PRODUCT INFORMATION**

#### **Expression system**

E.coli

#### **Domain**

1-168aa

#### **UniProt No.**

P0A9H1

#### **NCBI Accession No.**

NP 417540

#### **Alternative Names**

G/u mismatch-specific DNA glycosylase, xanthine DNA glycosylase, dug, ECK3058, JW3040, ygjF

#### PRODUCT SPECIFICATION

#### **Molecular Weight**

21.1 kDa (191aa) confirmed by MALDI-TOF

#### Concentration

0.5mg/ml (determined by Bradford assay)

#### **Formulation**

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 0.1M NaCl, 20% glycerol

#### **Purity**

> 90% by SDS-PAGE

#### Tag

His-Tag

#### **Application**

SDS-PAGE

#### **Storage Condition**

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

#### **BACKGROUND**

#### **Description**

G/u mismatch-specific DNA glycosylase, xanthine DNA glycosylase, also known as mug, belongs to the TDG/mug DNA glycosylase family. It has been proposed that the Mug protein excises 3, N4-ethenocytosine and removes the uracil base from mismatches in the order of u:G>u:A, although the biological role remains unclear. The enzyme uracil-N-Glycosylase removes uracil from the DNA leaving an AP site. It is capable of hydrolyzing the carbon-nitrogen bond between the sugar-phosphate backbone of the DNA and the mispaired base. The complementary strand guanine functions in substrate recognition. Recombinant E. coli mug protein, fused to His-



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tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.

#### **Amino acid Sequence**

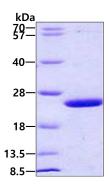
<MGSSHHHHHH SSGLVPRGSH MGS>MVEDILA PGLRVVFCGI NPGLSSAGTG FPFAHPANRF WKVIYQAGFT DRQLKPQEAQ HLLDYRCGVT KLVDRPTVQA NEVSKQELHA GGRKLIEKIE DYQPQALAIL GKQAYEQGFS QRGAQWGKQT LTIGSTQIWV LPNPSGLSRV SLEKLVEAYR ELDQALVVRG R

#### **General References**

Lee HW., et al. (2010) J Biol Chem. 285(53):41483-90 Gallinari P., et al. (1996) Nature. 383(6602):735-8.

#### **DATA**

#### **SDS-PAGE**



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.

