

# Recombinant human SMUG1 protein

Catalog Number: ATGP1848

## PRODUCT INFORMATION

---

### Expression system

E.coli

### Domain

1-270aa

### UniProt No.

Q53HV7

### NCBI Accession No.

NP\_055126

### Alternative Names

Single-strand-selective monofunctional uracil-DNA glycosylase, FDG, HMuDG, uNG3

## PRODUCT SPECIFICATION

---

### Molecular Weight

32.3 kDa (293aa) confirmed by MALDI-TOF

### Concentration

0.5mg/ml (determined by Bradford assay)

### Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 0.2M NaCl, 30% glycerol, 1mM DTT

### Purity

> 95% 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

Single-strand-selective monofunctional uracil-DNA glycosylase, also known as SMUG1, is a enzyme responsible for recognizing base lesions in the genome and initiating base excision DNA repair. This protein acts as a monofunctional DNA glycosylase specific for uracil (u) residues in DNA and has a preference for single-stranded DNA substrates. Recombinant human SMUG1 protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.

## Recombinant human SMUG1 protein

Catalog Number: ATGP1848

### Amino acid Sequence

MGSSHHHHHH SSSLVPRGSH MGSMPQAFLL GSIHEPAGAL MEPQPCPSL AESFLEEELR LNAELSQLQF SEPVGIIYNP  
VEYAWEPHRN YVTRYCQGPK EVLFLGMNPG PFGMAQTGVP FGEVSMVRDW LGIVGPVLTTP PQEHPKRPVL GLECPQSEVS  
GARFWGFFRN LCGQPEVFFH HCFVHNLCLPL LFLAPSGRNL TPAELPAKQR EQLLGICDAA LCRQVQLLGV RLVVGVGRLA  
EQRARRALAG LMPEVQVEGL LHPSRNPQA NKGWEAVAKE RLNELGLLPL LLK

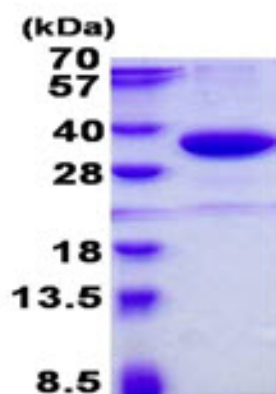
### General References

Masaoka A., et al. (2003) *Biochemistry*. 42:5003-5012

Boorstein R.J., et al. (2001) *J. Biol. Chem.* 276:41991-41997

## DATA

### SDS-PAGE



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

15% SDS-PAGE (3ug)