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## Product Data Sheet

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Product Name: SMUG1 Human

Cat. No.: GP22252

Batch No.: 1

**Product Data**

Purity	>98%	Source	E.coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Single-strand selective monofunctional uracil DNA glycosylase; SMUG1; FDG; UNG3; HMUDG.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MGSMPQAFLL GSIHEPAGAL MEPQPCPGSL AESFLEEELR LNAELSQLQF SEPVGIIYNP VEYAWEPHRN YVTRYCQGPK EVLFLGMNPG PFGMAQTGVP FGEVSMVRDW LGIVGPVLTTP PQEHPKRPVL GLECPQSEVS GARFWGFFRN LCGQPEVFFH HCFVHNLCP LFLAPSGRNL TPAELPAKQR EQLLGICDAA LCRQVQLLGV RLVVGVGRLA EQRARRALAG LMPEVQVEGL LHPSRNPQA NKGWEAVAKE RLNELGLLPL LLK.		
Formulation	The SMUG1 solution (0.5mg/ml) contains 20mM Tris-HCl buffer (pH 8.0), 0.2M NaCl, 30% glycerol and 1mM DTT.		

**Introduction**

Single-strand-selective monofunctional uracil-DNA glycosylase (SMUG1) is an enzyme responsible for recognizing base lesions in the genome and initiating base excision DNA repair. SMUG1 participates in base excision repair by removing uracil from single- and double-stranded DNA. SMUG1 serves as a monofunctional DNA glycosylase specific for uracil (U) residues in DNA and has inclination for single-stranded DNA substrates. SMUG1 activity is greater against mismatches (U/G) than against matches (U/A).

**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.

**Background**

SMUG1 Human Recombinant produced in E.coli is a single, non-glycosylated polypeptide

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

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chain containing 293 amino acids (1-270) and having a molecular mass of 32.3kDa. SMUG1 is fused to a 23 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

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