

# Human Single-Strand Selective Monofunctional Uracil DNA Glycosylase (SMUG1) ELISA Kit | SMUG1 elisa kit

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| CATALOG #<br><b>AAA330777</b> | REACTIVITY<br><b>Human</b> |
|-------------------------------|----------------------------|

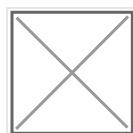
## PRODUCT SYNONYMS

Single-Strand Selective Monofunctional Uracil DNA Glycosylase (SMUG1); Human Single-Strand Selective Monofunctional Uracil DNA Glycosylase (SMUG1) ELISA Kit; SMUG1; FDG; HMUDG; MGC104370; UNG3; single-strand selective monofunctional uracil DNA glycosylase; SMUG1 elisa kit

## PRODUCT SPECIFICATIONS

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| Reactivity              | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Specificity             | Human Single-strand selective monofunctional uracil DNA glycosylase (SMUG1) ELISA Kit has high sensitivity and excellent specificity for detection of Human SMUG1. No significant cross-reactivity or interference between Human SMUG1 and analogues was observed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Sequence Length         | 270                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Assay Type              | Sandwich ELISA (Quantitative)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Samples                 | Cell Culture Supernatants, Serum, Plasma, Other Biological Fluids                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Detection Method        | Colorimetric                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Usage Notes             | <ul style="list-style-type: none"> <li>* Do not mix components from different kit lots or use reagents beyond the kit expiration date.</li> <li>* Allow all reagents to warm to room temperature for at least 30 minutes before opening.</li> <li>* Pre-rinse the pipet tip with reagent, use fresh pipet tips for each sample, standard and reagent to avoid contamination.</li> <li>* Unused wells must be kept desiccated at 4 degree C in the sealed bag provided.</li> <li>* Mix Thoroughly is very important for the result. It is recommended using low frequency oscillator or slight hand shaking every 10 minutes.</li> <li>* It is recommended that all samples and standards be assayed in duplicate or triplicate.</li> </ul> |
| Preparation and Storage | Store at 2-8 degree C.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

## IMAGES



### Standard Curve (Sample)

Fig.1. Human Single-strand selective monofunctional uracil DNA glycosylase (SMUG1) Standard Curve.

ADDITIONAL INFORMATION

|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for SMUG1 elisa kit | <p>Description: This Human Single-strand selective monofunctional uracil DNA glycosylase (SMUG1) ELISA Kit employs a two-site sandwich ELISA to quantitate SMUG1 in samples. An antibody specific for SMUG1 has been pre-coated onto a microplate. Standards and samples are pipetted into the wells and any SMUG1 present is bound by the immobilized antibody. After removing any unbound substances, a biotin-conjugated antibody specific for SMUG1 is added to the wells. After washing, Streptavidin conjugated Horseradish Peroxidase (HRP) is added to the wells. Following a wash to remove any unbound avidin-enzyme reagent, a substrate solution is added to the wells and color develops in proportion to the amount of SMUG1 bound in the initial step. The color development is stopped and the intensity of the color is measured.</p> <p>Background: SMUG1 is a glycosylase that removes uracil from single- and double-stranded DNA in nuclear chromatin, thus contributing to base excision repair. The deduced 270-amino acid protein has a calculated molecular mass of about 30 kD. Human SMUG1 shares 60% identity with the Xenopus protein. Fluorescence-tagged SMUG1 localized predominantly to the nucleus of transiently transfected HeLa cells. SMUG1 showed broader substrate specificity than UNG2, and AP endonuclease had a strong stimulatory effect on SMUG1 against double-stranded uracil, apparently due to enhance dissociation of SMUG1 from AP sites in double-stranded DNA. SMUG1 accumulated within nucleoli in cultured epithelial cells, while UNG2 was excluded from nucleoli.</p> |
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NCBI AND UNIPROT INFORMATION

|                                  |                                                                         |
|----------------------------------|-------------------------------------------------------------------------|
| NCBI GI #                        | 344925869                                                               |
| NCBI GeneID                      | 23583                                                                   |
| NCBI Accession #                 | NP_001230716.1                                                          |
| NCBI GenBank Nucleotide #        | NP_001230716.1                                                          |
| UniProt Accession #              | Q53HV7                                                                  |
| NCBI Official Full Name          | single-strand selective monofunctional uracil DNA glycosylase isoform 1 |
| NCBI Official Synonym Full Names | single-strand-selective monofunctional uracil-DNA glycosylase 1         |
| NCBI Official Symbol             | SMUG1                                                                   |
| NCBI Official Synonym Symbols    | FDG; UNG3; HMUDG                                                        |
| NCBI Protein Information         | single-strand selective monofunctional uracil DNA glycosylase           |
| UniProt Protein Name             | Single-strand selective monofunctional uracil DNA glycosylase           |
| UniProt Gene Name                | SMUG1                                                                   |
| UniProt Entry Name               | SMUG1_HUMAN                                                             |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/human-elisa-kits/single-strand-selective-monofunctional-uracil-dna-glycosylase-smug1/330777>