

## SMUG1 Antibody

Purified Rabbit Polyclonal Antibody (Pab)  
Catalog # AP51894-100 □

### Specification

#### SMUG1 Antibody - Product info

Application	WB
Primary Accession	<a href="#">Q53HV7</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	34 KDa

#### SMUG1 Antibody - Additional info

Gene ID 23583

#### Other Names

Single-strand selective monofunctional uracil DNA glycosylase,  
322-, SMUG1

#### Target/Specificity

KLH conjugated synthetic peptide derived from human SMUG1

#### Dilution

WB~~ 1:1000

#### Format

0.01M PBS, pH 7.2, 0.1% Sodium azide, Glycerol 50%

#### Storage

Store at -20 °C. Stable for 12 months from date of receipt

#### SMUG1 Antibody - Protein Information

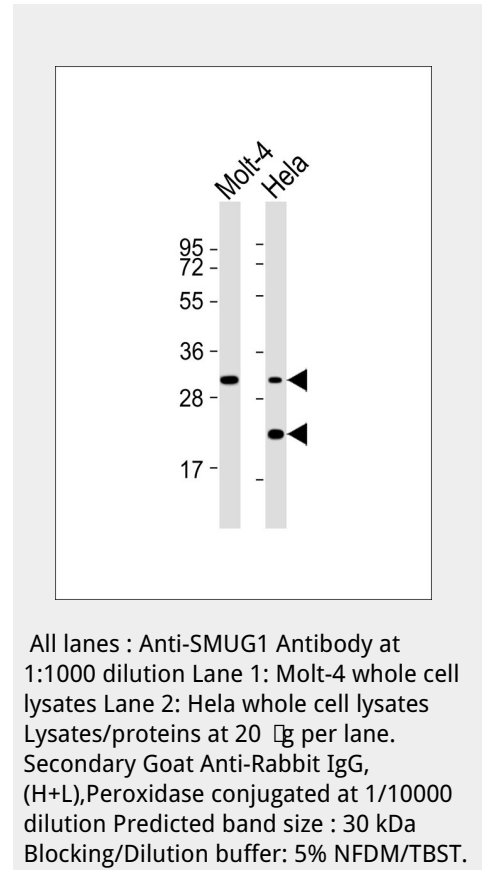
#### Name SMUG1

#### Function

Recognizes base lesions in the genome and initiates base excision DNA repair. Acts as a monofunctional DNA glycosylase specific for uracil (U) residues in DNA with a preference for single-stranded DNA substrates. The activity is greater toward mismatches (U/G) compared to matches (U/A). Excises uracil (U), 5- formyluracil (fU) and uracil derivatives bearing an oxidized group at C5 [5-hydroxyuracil (hoU) and 5-hydroxymethyluracil (hmU)] in ssDNA and dsDNA, but not analogous cytosine derivatives (5- hydroxycytosine and 5-formylcytosine), nor other oxidized bases. The activity is damage-specific and salt-dependent. The substrate preference is the following: ssDNA > dsDNA (G pair) = dsDNA (A pair) at low salt concentration, and dsDNA (G pair) > dsDNA (A pair) > ssDNA at high salt concentration.

#### Cellular Location

Nucleus



## SMUG1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [□Western Blot](#)
- [□Blocking Peptides](#)
- [□Dot Blot](#)
- [□Immunohistochemistry](#)
- [□Immunofluorescence](#)
- [□Immunoprecipitation](#)
- [□Flow Cytometry](#)
- [□Cell Culture](#)

## SMUG1 Antibody - Background

Responsible for recognizing base lesions in the genome and initiating base excision DNA repair. Acts as a monofunctional DNA glycosylase specific for uracil (U) residues in DNA and has a preference for single-stranded DNA substrates. The activity is greater against mismatches (U/G) than against matches (U/A). Excised uracil (U), 5-formyluracil (fU) and uracil derivatives bearing an oxidized group at C5 [5-hydroxyuracil (hoU) and 5-hydroxymethyluracil (hmU)] in ssDNA and dsDNA but not analogous cytosine derivatives (5-hydroxycytosine and 5-formylcytosine) and other oxidized damage. The activity is damage specificity and salt concentration-dependent. The general order of the preference for ssDNA and dsDNA is the following: ssDNA > dsDNA (G pair) = dsDNA (A pair) at the low salt concentration. At the high concentration dsDNA (G pair) > dsDNA (A pair) > ssDNA.

## SMUG1 Antibody - References

Haushalter K.A., et al. *Curr. Biol.* 9:174-185(1999). Masaoka A., et al. *Biochemistry* 42:5003-5012(2003). Ota T., et al. *Nat. Genet.* 36:40-45(2004). Suzuki Y., et al. Submitted (APR-2005) to the EMBL/GenBank/DDBJ databases. Mural R.J., et al. Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.