10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

SMUG1 Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51894

Specification

SMUG1 Antibody - Product Information

Application	**WB**
Primary Accession	Q53HV7
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**34 KDa**
Antigen Region	**71 - 130**

SMUG1 Antibody - Additional Information

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, 0.09% (W/V) 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.

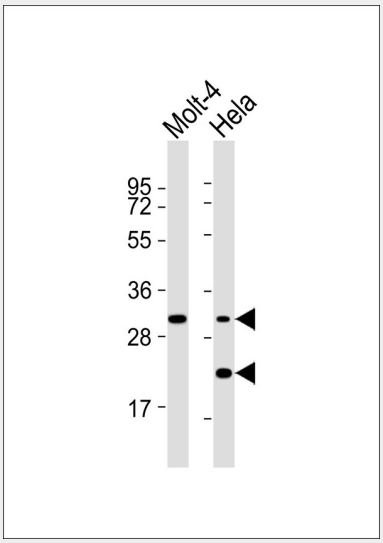
Cellular Location
Nucleus

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 Cytomety
- Cell Culture

SMUG1 Antibody - Images



All lanes : Anti-SMUG1 Antibody at 1:1000 dilution Lane 1: Molt-4 whole cell lysates Lane 2: Hela whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L),Peroxidase conjugated at 1/10000 dilution Predicted band size : 30 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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.