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Anti-UDG Antibody
Rabbit polyclonal antibody to UDG
Catalog # AP59727

Specification

Anti-UDG Antibody - Product Information

Application	**WB, IHC**
Primary Accession	P13051
Other Accession	P97931
Reactivity	**Human, Mouse, Rat, Pig, Bovine**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**34645**

Anti-UDG Antibody - Additional Information

Gene ID 7374

Other Names
DGU; UNG1; UNG15; Uracil-DNA glycosylase; UDG

Target/Specificity
Recognizes endogenous levels of UDG protein.

Dilution
WB~~WB (1/500 - 1/1000), IH (1/100 - 1/200)
IHC~~1:100~500

Format
Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.

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

Anti-UDG Antibody - Protein Information

Name UNG {ECO:0000255|HAMAP-Rule:MF_03166}

Function
Uracil-DNA glycosylase that hydrolyzes the N-glycosidic bond between uracil and deoxyribose in single- and double-stranded DNA (ssDNA and dsDNA) to release a free uracil residue and form an abasic (apurinic/apyrimidinic; AP) site. Excises uracil residues arising as a result of misincorporation of dUMP residues by DNA polymerase during replication or due to spontaneous or enzymatic deamination of cytosine (PubMed:12958596, PubMed:15967827, PubMed:17101234, PubMed:<a href="http://www.uniprot.org/citations/22521144"

target="_blank">22521144, PubMed:7671300, PubMed:8900285, PubMed:9016624, PubMed:9776759). Mediates error-free base excision repair (BER) of uracil at replication forks. According to the model, it is recruited by PCNA to S-phase replication forks to remove misincorporated uracil at U:A base mispairs in nascent DNA strands. Via trimeric RPA it is recruited to ssDNA stretches ahead of the polymerase to allow detection and excision of deaminated cytosines prior to replication. The resultant AP sites temporarily stall replication, allowing time to repair the lesion (PubMed:22521144). Mediates mutagenic uracil processing involved in antibody affinity maturation. Processes AICDA-induced U:G base mispairs at variable immunoglobulin (Ig) regions leading to the generation of transversion mutations (PubMed:12958596). Operates at switch sites of Ig constant regions where it mediates Ig isotype class switch recombination. Excises AICDA-induced uracil residues forming AP sites that are subsequently nicked by APEX1 endonuclease. The accumulation of staggered nicks in opposite strands results in double strand DNA breaks that are finally resolved via non-homologous end joining repair pathway (By similarity) (PubMed:12958596).

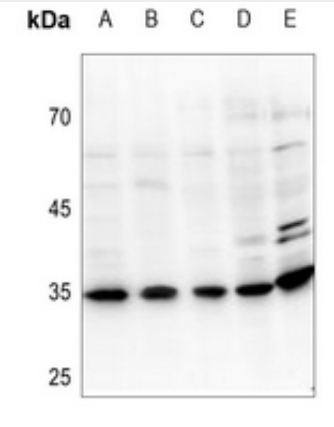
Cellular Location
[Isoform 1]: Mitochondrion

Anti-UDG 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

Anti-UDG Antibody - Images



Western blot analysis of UDG expression in PC2 (A), SGC7901 (B), HEK293T (C), PC12 (D), CT26 (E) whole cell lysates.

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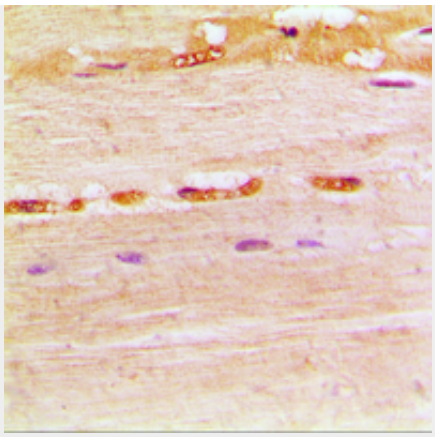

Immunohistochemical analysis of UDG staining in human muscle formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

Anti-UDG Antibody - Background

KLH-conjugated synthetic peptide encompassing a sequence within the center region of human UDG. The exact sequence is proprietary.