

# Recombinant Anti-UDG Rabbit mAb

Catalog # AP95240

## Product Information

|                   |                        |
|-------------------|------------------------|
| Application       | WB, IHC, FC, IF/IC     |
| Primary Accession | <a href="#">P13051</a> |
| Reactivity        | Human, Mouse, Rat      |
| Host              | Rabbit                 |
| Clonality         | Monoclonal             |
| Calculated MW     | 34645                  |

## Additional Information

|                    |                                                                                                                       |
|--------------------|-----------------------------------------------------------------------------------------------------------------------|
| Gene ID            | 7374                                                                                                                  |
| Other Names        | DGU; UNG1; UNG15; Uracil-DNA glycosylase; UDG                                                                         |
| Target/Specificity | KLH-conjugated synthetic peptide encompassing a sequence within human UDG protein. The exact sequence is proprietary. |
| Dilution           | WB~~WB (1/500 - 1/1000) IHC~~1:100~500 FC~~1:10~50 IF/IC~~N/A                                                         |
| Format             | Liquid in PBS, pH 7.3, 50% glycerol, 0.05% BSA, and 0.05% Proclin300.                                                 |
| Storage            | Store at -20 °C.Stable for 12 months from date of receipt                                                             |

## Protein Information

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name     | UNG {ECO:0000255 HAMAP-Rule:MF_03166}                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Function | <p>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:<a href="#">12958596</a>, PubMed:<a href="#">15967827</a>, PubMed:<a href="#">17101234</a>, PubMed:<a href="#">22521144</a>, PubMed:<a href="#">7671300</a>, PubMed:<a href="#">8900285</a>, PubMed:<a href="#">9016624</a>, PubMed:<a href="#">9776759</a>). 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 mismatches 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:<a href="#">22521144</a>). Mediates mutagenic uracil processing involved in antibody affinity maturation. Processes AICDA-induced U:G base mismatches at variable immunoglobulin (Ig) regions leading to the generation of transversion</p> |

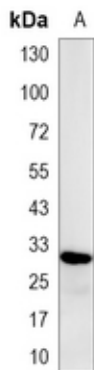
mutations (PubMed:[12958596](#)). Operates at switch sites of Ig constant regions where it mediates Ig isotype class switch recombination. Excises AICDA-induced uracil residues forming AP sites that are subsequently nicked by APEX1 endonuclease. The accumulation of staggered nicks in opposite strands results in double strand DNA breaks that are finally resolved via non-homologous end joining repair pathway (By similarity) (PubMed:[12958596](#)).

## Cellular Location

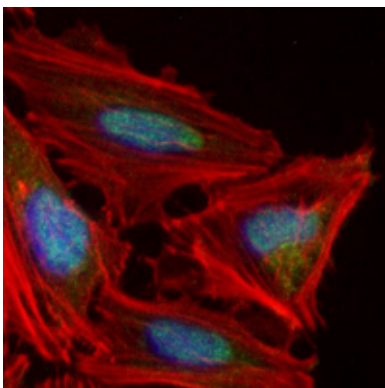
[Isoform 1]: Mitochondrion

## Images

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Western blot analysis of UDG expression in HeLa (A) whole cell lysates. (Predicted band size: 35 kD; Observed band size: 32 kD)



Immunofluorescent analysis of UDG staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with an AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.