

UDG Polyclonal Antibody

Catalog # AP72998

Product Information

Application	WB, IHC-P, IF, ICC, E
Primary Accession	P13051
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	34645

Additional Information

Gene ID	7374
Other Names	UNG; DGU; UNG1; UNG15; Uracil-DNA glycosylase; UDG
Dilution	WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/40000. Not yet tested in other applications. IHC-P~~N/A IF~~1:50~200 ICC~~N/A E~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20°C

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: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 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:22521144). 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

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](#)).

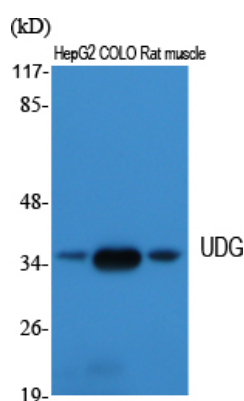
Cellular Location

[Isoform 1]: Mitochondrion

Background

Excises uracil residues from the DNA which can arise as a result of misincorporation of dUMP residues by DNA polymerase or due to deamination of cytosine.

Images



Western Blot analysis of various cells using UDG Polyclonal Antibody. Secondary antibody was diluted at 1:20000



Western Blot analysis of COLO205 cells using UDG Polyclonal Antibody. Secondary antibody was diluted at 1:20000

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