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

UNG1 Antibody
Catalog # ASC10437

Specification

UNG1 Antibody - Product Information

Application	**WB, IHC, IF**
Primary Accession	P13051
Other Accession	NP_003353, 6224979
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Application Notes	**UNG1 antibody can be used for the detection of UNG1 by Western blot at 0.5 - 2 µg/mL. Antibody can also be used for immunohistochemistry starting at 2 µg/mL. For immunofluorescence start at 20 µg/mL.**

UNG1 Antibody - Additional Information

Gene ID **7374**

Other Names
UNG1 Antibody: DGU, UDG, UNG1, UNG2, HIGM4, HIGM5, UNG15, DGU, Uracil-DNA glycosylase, uracil-DNA glycosylase

Target/Specificity
UNG;

Reconstitution & Storage
UNG1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

Precautions
UNG1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

UNG1 Antibody - Protein Information

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

Function
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.

Cellular Location
[Isoform 1]: Mitochondrion.

Tissue Location

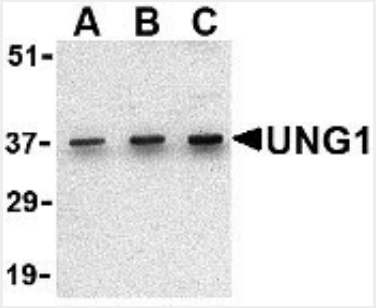
Isoform 1 is widely expressed with the highest expression in skeletal muscle, heart and testicles. Isoform 2 has the highest expression levels in tissues containing proliferating cells

UNG1 Antibody - Protocols

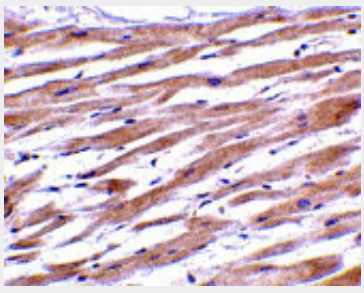
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

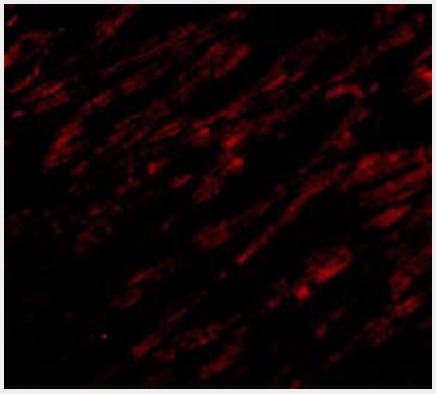
UNG1 Antibody - Images



Western blot analysis of UNG1 in C2C12 cell lysate with UNG1 antibody at (A) 0.5, (B) 1 and (C) 2 µg/mL.



Immunohistochemistry of UNG1 in human heart tissue with UNG1 antibody at 2 µg/mL.



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Immunofluorescence of UNG1 in Human Heart cells with UNG1 antibody at 20 µg/mL.

UNG1 Antibody - Background

UNG1 Antibody: The human uracil-DNA glycosylase (UNG) gene encodes both mitochondrial (UNG1) and nuclear (UNG2) forms through differentially regulated promotes and alternative splicing. While UNG2 is the major enzyme in the base excision repair pathway that removes uracil residues from nuclear DNA that arise through either misincorporation during replication or cytosine deamination, inhibition of UNG1 by uracil glycosylase inhibitor did not lead to increased levels of spontaneous or induced mitochondrial DNA mutations. However, decreased levels of UNG activity and increased oxidative damage to mitochondrial DNA were seen in older mice, suggesting that mitochondrial DNA repair mechanisms may be involved in various neurodegenerative disorders in an age-dependent manner. This UNG1 antibody will not cross-react with UNG2.

UNG1 Antibody - References

Krokan HE, Otterlei M, Nilsen H, et al. Properties and functions of human uracil-DNA glycosylase from the UNG gene. Prog. Nucleic Acid Res. Mol. Biol. 2001; 68:365-86.
Fromm JC and Verdine GL. Base excision repair. Adv. Protein Chem. 2004; 69:1-41.
Kachhap S and Singh KK. Mitochondrial inhibition of uracil-DNA glycosylase is not mutagenic. Mol. Cancer 2004; 3:32
Imam SZ, Karahalil B, Hogue BA, et al. Mitochondrial and nuclear DNA-repair capacity of various brain regions in mouse is altered in an age-dependent manner. Neurobiol. Aging 2006; 27:1129-36.