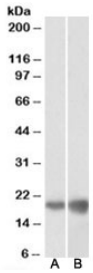
Deoxyuridine Triphosphatase Antibody / DUT (R35363)

Catalog No.	Formulation	Size
R35363-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Predicted Reactivity	Pig, Cow
Format	Antigen affinity purified
Host	Goat
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
Gene ID	1854
Applications	Western blot: 0.1-0.3ug/ml ELISA (peptide) LOD: 1:16000
Limitations	This Deoxyuridine Triphosphatase Antibody is available for research use only.



Deoxyuridine Triphosphatase Antibody HEK293 and HeLa WB. Western blot analysis of HEK293 and HeLa cell lysates using Deoxyuridine Triphosphatase Antibody demonstrates detection of a band at approximately 18 kDa, consistent with the mature nuclear isoform of DUT. Deoxyuridine Triphosphatase is a nucleotide metabolism enzyme that regulates intracellular dUTP pools and prevents inappropriate uracil incorporation into DNA, thereby supporting DNA replication fidelity and genome maintenance. DUT is known to exist as multiple isoforms, including a longer precursor form and a shorter processed nuclear form. The observed band is consistent with the mature nuclear isoform commonly detected in proliferating human cells. Western blot was performed using 0.1 ug/ml primary antibody. Predicted molecular weights: ~27 kDa (isoform 1) and ~18 kDa (isoform 2).

Description

Deoxyuridine Triphosphatase Antibody is designed for the detection and study of Deoxyuridine Triphosphatase (DUT), a highly conserved enzyme that regulates intracellular nucleotide pools and protects genomic DNA from inappropriate uracil

incorporation. DUT catalyzes the hydrolysis of dUTP to dUMP and pyrophosphate, thereby reducing intracellular dUTP concentrations while generating a precursor required for thymidine biosynthesis. Through this essential activity, DUT supports accurate DNA synthesis and contributes to preservation of genomic stability during cellular proliferation.

Deoxyuridine Triphosphatase serves as a critical regulator of nucleotide metabolism and DNA replication fidelity. Without adequate DUT activity, elevated intracellular dUTP levels can promote incorporation of uracil into newly synthesized DNA, triggering DNA repair pathways and increasing the risk of replication-associated damage. By maintaining proper nucleotide balance, DUT helps minimize mutagenic events and supports efficient genome maintenance across a wide variety of cell types.

The enzyme plays an important role in biologic pathways linking nucleotide metabolism, DNA replication, and DNA repair. Because rapidly dividing cells require precise control of nucleotide pools to sustain high rates of DNA synthesis, DUT expression is frequently associated with proliferative activity. Researchers often examine Deoxyuridine Triphosphatase in studies involving cell cycle regulation, replication stress, genome stability, and cellular responses to DNA damage.

Alterations in nucleotide metabolism pathways have been implicated in cancer, therapeutic resistance, and other disorders characterized by abnormal cellular growth. Consequently, DUT has become an important target in studies investigating mechanisms of genomic instability and the cellular consequences of disrupted nucleotide homeostasis. Its highly conserved function and central role in DNA maintenance continue to make Deoxyuridine Triphosphatase a valuable marker for understanding genome protection mechanisms in both normal and disease-related biological systems.

Deoxyuridine Triphosphatase Antibody is useful for evaluating DUT expression and studying molecular pathways involved in nucleotide metabolism, DNA replication fidelity, genome maintenance, and DNA integrity. Researchers utilize Deoxyuridine Triphosphatase Antibody reagents to investigate how cells coordinate nucleotide homeostasis with preservation of genomic stability and accurate DNA replication.

For additional information on DUT function, nucleotide metabolism, and genome maintenance pathways, visit our DUT Antibody / Genome Integrity Enzyme Antibody page.

Application Notes

Optimal dilution of the Deoxyuridine Triphosphatase Antibody should be determined by the researcher.

Immunogen

Amino acids QLRFARLSEHATAPT were used as the immunogen for this DUT / Deoxyuridine Triphosphatase antibody. This sequence is common to isoforms 1 and 2.

Storage

Aliquot and store the DUT / Deoxyuridine Triphosphatase antibody at -20oC.

Alternate Names

Deoxyuridine Triphosphatase Antibody, DUT Antibody, dUTP Pyrophosphatase Antibody, dUTPase Antibody, Nucleotide Metabolism Enzyme Antibody, DNA Integrity Enzyme Antibody, Uracil Metabolism Enzyme Antibody

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