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Anti-DUT Antibody
Catalog # ABO10523

Specification

Anti-DUT Antibody - Product Information

Application	**WB, IHC-P**
Primary Accession	P33316
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Deoxyuridine 5'-triphosphate nucleotidohydrolase, mitochondrial(DUT) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-DUT Antibody - Additional Information

Gene ID 1854

Other Names
Deoxyuridine 5'-triphosphate nucleotidohydrolase, mitochondrial, dUTPase, 3.6.1.23, dUTP pyrophosphatase, DUT

Calculated MW
26563 MW KDa

Application Details
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Rat, Mouse, By Heat
Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

Subcellular Localization
Isoform 2: Nucleus.

Tissue Specificity
Found in a variety of tissues. Isoform 3 expression is constitutive, while isoform 2 expression correlates with the onset of DNA replication (at protein level). Isoform 2 degradation coincides with the cessation of nuclear DNA replication (at protein level). .

Protein Name
Deoxyuridine 5'-triphosphate nucleotidohydrolase, mitochondrial

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence at the C-terminus of human DUT(212-229aa

KKGDRIAQLICERIFYPE), different from the related rat and mouse sequences by two amino acids.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage

At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Sequence Similarities
Belongs to the dUTPase family.

Anti-DUT Antibody - Protein Information

Name DUT

Function
Catalyzes the cleavage of 2'-deoxyuridine 5'-triphosphate (dUTP) into 2'-deoxyuridine 5'-monophosphate (dUMP) and inorganic pyrophosphate and through its action efficiently prevents uracil misincorporation into DNA and at the same time provides dUMP, the substrate for de novo thymidylate biosynthesis (PubMed:17880943, PubMed:8631816, PubMed:8805593). Inhibits peroxisome proliferator- activated receptor (PPAR) activity by binding of its N-terminal to PPAR, preventing the latter's dimerization with retinoid X receptor (By similarity). Essential for embryonic development (By similarity).

Cellular Location
[Isoform 2]: Nucleus

Tissue Location
Found in a variety of tissues. Isoform 3 expression is constitutive, while isoform 2 expression correlates with the onset of DNA replication (at protein level). Isoform 2 degradation coincides with the cessation of nuclear DNA replication (at protein level)

Anti-DUT 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-DUT Antibody - Images

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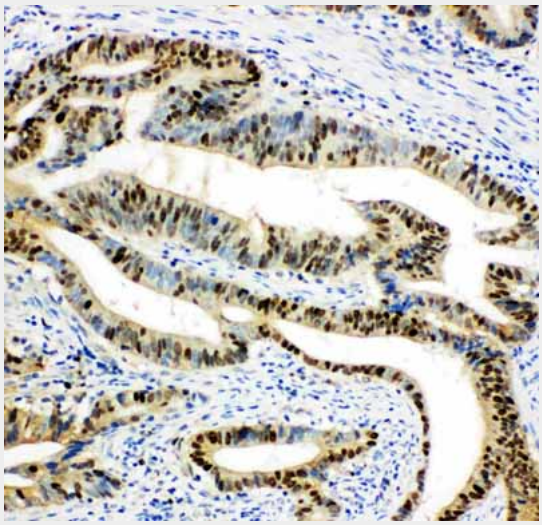

Anti-DUT antibody, ABO10523, IHC(P)IHC(P): Human Intestinal Cancer Tissue

Anti-DUT antibody, ABO10523, Western blottingAll lanes: Anti DUT (ABO10523) at 0.5ug/mlLane 1: HELA Whole Cell Lysate at 40ugLane 2: SMMC Whole Cell Lysate at 40ugPredicted bind size: 27KDObserved bind size: 27KD

Anti-DUT Antibody - Background

Deoxyuridine triphosphate nucleotidohydrolase(dUTPase) is responsible for maintaining low intracellular levels of dUTP, thus preventing the incorporation of dUTP into DNA. dUTPase activity/expression can be down-regulated using siRNA specifically targeted to dUTPase mRNA and dUTPase plays a role in DNA nucleotide metabolism. This protein, present predominantly in the cytoplasm, contains 252 amino acids with a Mr of 26,704. It exhibits 35% identity with the E.coli dUTPase and 53% identity with the Saccharomyces cerevisiae enzyme. The nuclear and mitochondrial forms of dUTPase are encoded by the same gene with isoform-specific transcripts arising through the use of alternative 5-prime exons. Human dUTPase exhibits 92% identity with rat. Moreover, this enzyme has profound effects on the efficacy of agents that target thymidylate biosynthesis.