

**Anti-DUT Antibody**  
Catalog # ABO10523**Specification****Anti-DUT Antibody - Product Information**

Application	IHC, WB
Primary Accession	<a href="#">P33316</a>
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<br>Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat<br>

**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 Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Thimerosal, 0.05mg NaN<sub>3</sub>.

**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:<a href="http://www.uniprot.org/citations/17880943" target="\_blank">17880943</a>, PubMed:<a href="http://www.uniprot.org/citations/8631816" target="\_blank">8631816</a>, PubMed:<a href="http://www.uniprot.org/citations/8805593" target="\_blank">8805593</a>). 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**

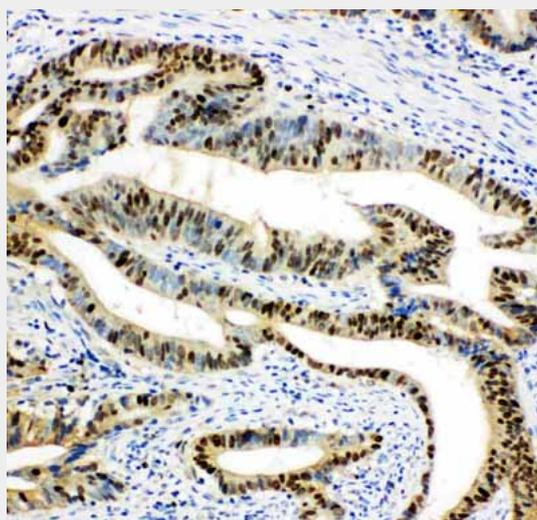
Found in a variety of tissues. Isoform 3 expression is constitutive, while isoform 2 expression correlates with the onset of DNA replication (at protein level). Isoform 2 degradation coincides with the cessation of nuclear DNA replication (at protein level)

### **Anti-DUT Antibody - Protocols**

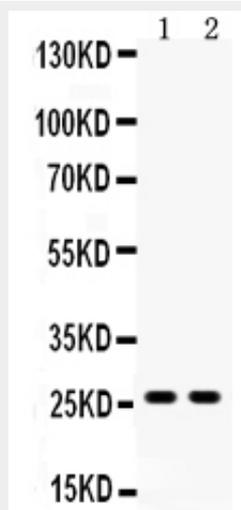
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **Anti-DUT Antibody - Images**



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



Anti-DUT antibody, ABO10523, Western blotting All lanes: Anti DUT (ABO10523) at 0.5ug/ml  
 Lane 1: HELA Whole Cell Lysate at 40ug Lane 2: SMMC Whole Cell Lysate at 40ug  
 Predicted bind size: 27KD  
 Observed 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.