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DUT Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14203b

Specification

DUT Antibody (C-term) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	P33316
Other Accession	P70583, NP_001939.1, NP_001020419.1, NP_001020420.1, Q9CQ43
Reactivity	**Human**
Predicted	**Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**26563**
Antigen Region	**170-198**

DUT Antibody (C-term) - Additional Information

Gene ID 1854

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

Target/Specificity
This DUT antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 170-198 amino acids from the C-terminal region of human DUT.

Dilution
WB~~1:1000
IHC-P~~1:10~50
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
DUT Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

DUT Antibody (C-term) - 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

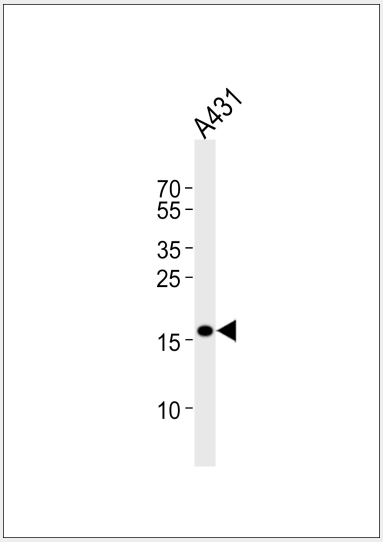
Tissue Location
Found in a variety of tissues. Isoform 3 expression is constitutive, while isoform 2 expression correlates with the onset of DNA replication (at protein level). Isoform 2 degradation coincides with the cessation of nuclear DNA replication (at protein level)

DUT Antibody (C-term) - 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

DUT Antibody (C-term) - Images



Western blot analysis of lysate from A431 cell line, using DUT Antibody (C-term)(Cat. #AP14203b). AP14203b was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysate at 35ug per lane.

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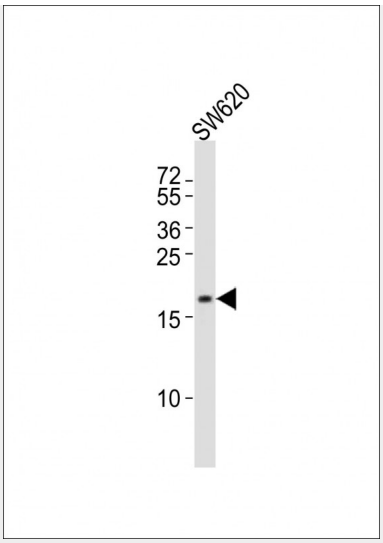
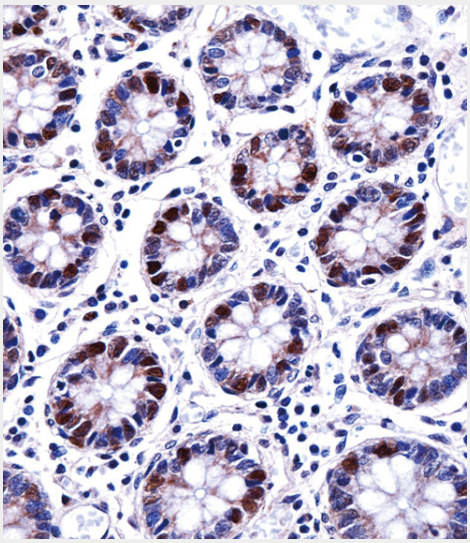


Anti-DUT Antibody (C-term)at 1:1000 dilution + SW620 whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 26. 5 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



DUT Antibody (C-term) (AP14203b)immunohistochemistry analysis in formalin fixed and paraffin embedded human colon tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of DUT Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.

DUT Antibody (C-term) - Background

This gene encodes an essential enzyme of nucleotide metabolism. The encoded protein forms a ubiquitous, homotetrameric enzyme that hydrolyzes dUTP to dUMP and pyrophosphate. This reaction serves two cellular purposes: providing a precursor (dUMP) for the synthesis of thymine nucleotides needed for DNA replication, and limiting intracellular pools of dUTP. Elevated levels of dUTP lead to increased incorporation of uracil into DNA, which induces extensive excision repair mediated by uracil glycosylase. This repair process, resulting in the removal and reincorporation of dUTP, is self-defeating and leads to DNA fragmentation and cell death. Alternative splicing of this gene leads to different isoforms that localize to either the mitochondrion or nucleus. A related pseudogene is located on chromosome 19.

DUT Antibody (C-term) - References

Takatori, H., et al. Liver Int. 30(3):438-446(2010) Quesada-Soriano, I., et al. Biochimie 92(2):178-186(2010) Chanson, A., et al. Am. J. Clin. Nutr. 89(6):1927-1936(2009) Takacs, E., et al. FEBS Lett. 583(5):865-871(2009) Venkatesan, K., et al. Nat. Methods 6(1):83-90(2009)