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DUT Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14203b

Product Information

Application	IHC-P, WB, E
Primary Accession	P33316
Other Accession	P70583, NP_001939.1, NP_001020419.1, NP_001020420.1
Reactivity	Human
Predicted	Rat, Mouse, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB34096
Calculated MW	26563
Antigen Region	170-198

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	IHC-P~~1:100~500 WB~~1:1000 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.

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)

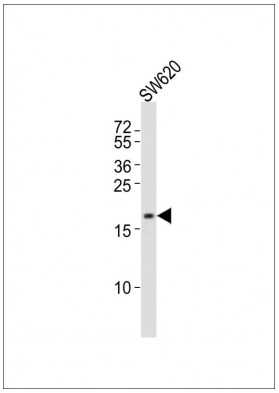
Background

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.

References

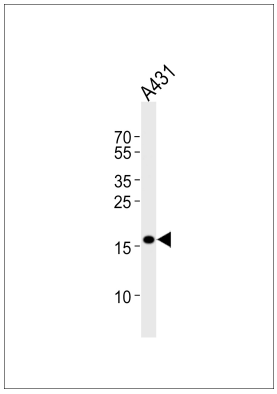
Takatori, H., et al. Liver Int. 30(3):438-446(2010) Quesada-Soriano, I., et al. Biochimie 92(2):178-186(2010) Chanson, A., et al. Am. J. Clin. Nutr. 89(6):1927-1936(2009) Takacs, E., et al. FEBS Lett. 583(5):865-871(2009) Venkatesan, K., et al. Nat. Methods 6(1):83-90(2009)

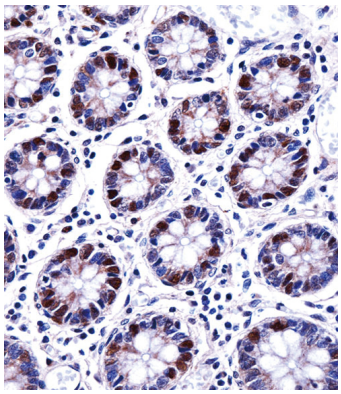
Images



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.

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.





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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.