



## Polyclonal Anti-dUTP pyrophosphatase, *dUTPase* (Sephacose Bead Conjugate)

**Catalogue No.** PA1030-S

**Lot No.** 05K01

**Ig type:** rabbit IgG

**Size:** 100µg/vial

### Specificity

Human, mouse, rat.

No cross reactivity with other proteins.

### Recommended application

(Immunoprecipitation(IP))

### Immunogen

A synthetic peptide corresponding to a sequence mapping at the middle region of human dUTPase, identical to the related rat and mouse sequence.

### Purification

Immunogen affinity purified.

### Formulation

50% slurry in PBS pH 7.2 with 0.01mg NaN<sub>3</sub> preservative.

### Storage

Store at 4°C for frequent use.

### Description:

This Antagene antibody is immobilized via covalent binding of primary amino groups to N-hydroxysuccinimide (NHS)-activated sepharose beads. It is useful for immunoprecipitation assays

## 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.

## REFERENCE

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3. Chu R, Lin Y, Rao MS, Reddy JK. Cloning and identification of rat deoxyuridine triphosphatase as an inhibitor of peroxisome proliferator-activated receptor alpha. J Biol Chem. 1996 Nov 1; 271(44):27670-6.
4. Ladner RD, Caradonna SJ. The human dUTPase gene encodes both nuclear and mitochondrial isoforms. Differential expression of the isoforms and characterization of a cDNA encoding the mitochondrial species. J Biol Chem. 1997 Jul 25; 272(30):19072-80.
5. Ladner RD. The role of dUTPase and uracil-DNA repair in cancer chemotherapy. Curr Protein Pept Sci. 2001 Dec; 2(4):361-70.

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