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DUT Antibody (monoclonal) (M01)

Mouse monoclonal antibody raised against a partial recombinant DUT.
Catalog # AT1831a

Specification

DUT Antibody (monoclonal) (M01) - Product Information

Application	**WB, IHC, IF, E**
Primary Accession	P33316
Other Accession	BC033645
Reactivity	**Human**
Host	**mouse**
Clonality	**Monoclonal**
Isotype	**IgG1 Kappa**
Calculated MW	**26563**

DUT Antibody (monoclonal) (M01) - Additional Information

Gene ID 1854

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

Target/Specificity
DUT (AAH33645, 68 a.a. ~ 164 a.a) partial recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.

Dilution
WB~~1:500~1000
IHC~~1:100~500
IF~~1:50~200
E~~N/A

Format
Clear, colorless solution in phosphate buffered saline, pH 7.2 .

Storage
Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.

Precautions
DUT Antibody (monoclonal) (M01) is for research use only and not for use in diagnostic or therapeutic procedures.

DUT Antibody (monoclonal) (M01) - Protocols

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

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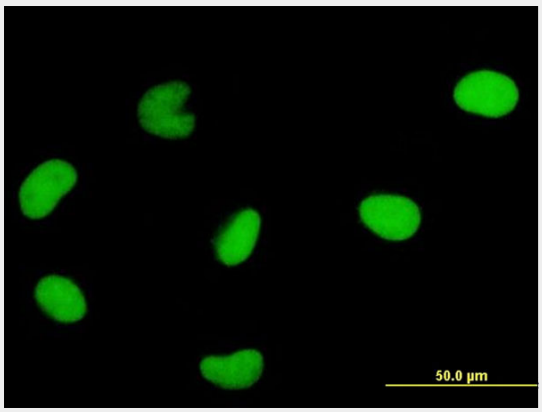
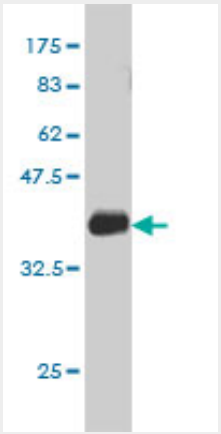
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

DUT Antibody (monoclonal) (M01) - Images



Immunofluorescence of monoclonal antibody to DUT on HeLa cell . [antibody concentration 10 ug/ml]



Antibody Reactive Against Recombinant Protein.Western Blot detection against Immunogen (36.3 KDa) .

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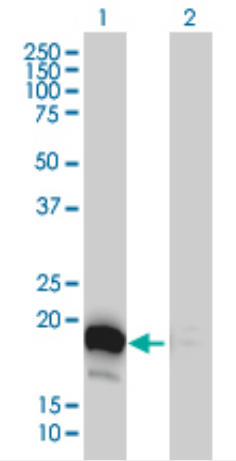
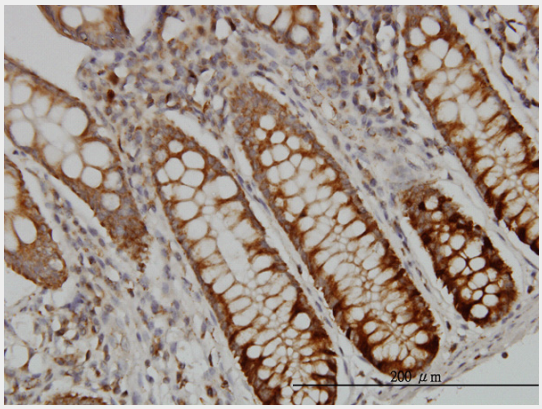
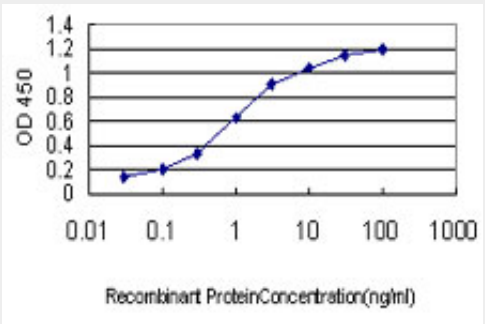


Western Blot analysis of DUT expression in transfected 293T cell line by DUT monoclonal antibody (M01), clone 1C9.

Lane 1: DUT transfected lysate(18 KDa).
Lane 2: Non-transfected lysate.



Immunoperoxidase of monoclonal antibody to DUT on formalin-fixed paraffin-embedded human colon. [antibody concentration 1 ug/ml]



Detection limit for recombinant GST tagged DUT is approximately 0.03ng/ml as a capture antibody.

DUT Antibody (monoclonal) (M01) - 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 (monoclonal) (M01) - References

dUTP pyrophosphatase expression correlates with a poor prognosis in hepatocellular carcinoma. Takatori H, et al. Liver Int, 2010 Mar. PMID 19968781.Kinetic properties and specificity of trimeric Plasmodium falciparum and human dUTPases. Quesada-Soriano I, et al. Biochimie, 2010 Feb. PMID 19879316.Polymorphisms in uracil-processing genes, but not one-carbon nutrients, are associated with altered DNA uracil concentrations in an urban Puerto Rican population. Chanson A, et al. Am J Clin Nutr, 2009 Jun. PMID 19403629.Molecular shape and prominent role of beta-strand swapping in organization of dUTPase oligomers. Tak?cs E, et al. FEBS Lett, 2009 Mar 4. PMID 19302784.An empirical framework for binary interactome mapping. Venkatesan K, et al. Nat Methods, 2009 Jan. PMID 19060904.