10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

MBTD1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP11372b

Specification

MBTD1 Antibody (C-term) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	Q05BQ5
Other Accession	Q6P5G3, NP_060113.2
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**70547**
Antigen Region	**564-592**

MBTD1 Antibody (C-term) - Additional Information

Gene ID 54799

Other Names
MBT domain-containing protein 1, MBTD1

Target/Specificity
This MBTD1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 564-592 amino acids from the C-terminal region of human MBTD1.

Dilution
WB~~1:1000
IHC-P~~1:50~100

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
MBTD1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

MBTD1 Antibody (C-term) - Protein Information

Name MBTD1 {ECO:0000303|PubMed:23915195, ECO:0000312|HGNC:HGNC:19866}

Function Chromatin reader component of the NuA4 histone acetyltransferase complex, a

multiprotein complex involved in transcriptional activation of select genes principally by acetylation of nucleosomal histones H4 and H2A (PubMed:27153538, PubMed:32209463). The NuA4 complex plays a direct role in repair of DNA double-strand breaks (DSBs) by promoting homologous recombination (HR) (PubMed:27153538). MBTD1 specifically recognizes and binds monomethylated and dimethylated 'Lys-20' on histone H4 (H4K20me1 and H4K20me2, respectively) (PubMed:19841675, PubMed:27153538, PubMed:32209463). In the NuA4 complex, MBTD1 promotes recruitment of the complex to H4K20me marks by competing with TP53BP1 for binding to H4K20me (PubMed:27153538). Following recruitment to H4K20me at DNA breaks, the NuA4 complex catalyzes acetylation of 'Lys-15' on histone H2A (H2AK15), blocking the ubiquitination mark required for TP53BP1 localization at DNA breaks, thereby promoting homologous recombination (HR) (PubMed:27153538).

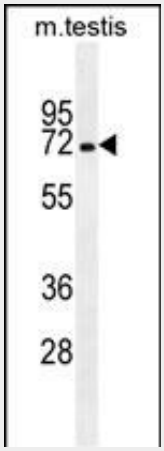
Cellular Location
Nucleus. Chromosome

MBTD1 Antibody (C-term) - Protocols

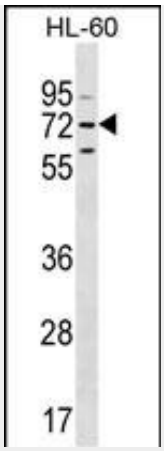
Provided below are standard protocols that you may find useful for product applications.

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

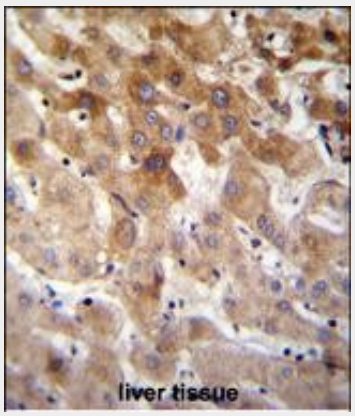
MBTD1 Antibody (C-term) - Images



MBTD1 Antibody (C-term) (Cat. #AP11372b) western blot analysis in mouse testis tissue lysates (35ug/lane).This demonstrates the MBTD1 antibody detected the MBTD1 protein (arrow).



MBTD1 Antibody (C-term) (Cat. #AP11372b) western blot analysis in HL-60 cell line lysates (35ug/lane).This demonstrates the MBTD1 antibody detected the MBTD1 protein (arrow).



MBTD1 Antibody (C-term) (Cat. #AP11372b)immunohistochemistry analysis in formalin fixed and paraffin embedded human liver tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of MBTD1 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.

MBTD1 Antibody (C-term) - Background

Putative Polycomb group (PcG) protein. PcG proteins maintain the transcriptionally repressive state of genes, probably via a modification of chromatin, rendering it heritably changed in its expressibility (By similarity). Specifically binds to monomethylated and dimethylated 'Lys-20' on histone H4.

MBTD1 Antibody (C-term) - References

Eryilmaz, J., et al. PLoS ONE 4 (10), E7274 (2009) :