

### **ALKBH5 Antibody (Center)**

Affinity Purified Rabbit Polyclonal Antibody (Pab) Catalog # AP18410c

## **Specification**

## **ALKBH5 Antibody (Center) - Product Information**

Application WB, FC, IHC-P,E

Primary Accession <u>Q6P6C2</u>

Other Accession <u>D3ZKD3</u>, <u>Q3TSG4</u>, <u>E1BH29</u>, <u>NP 060228.3</u>

Reactivity Human

Predicted Bovine, Mouse, Rat

Host Rabbit
Clonality Polyclonal
Isotype Rabbit IgG
Antigen Region 302-330

### **ALKBH5 Antibody (Center) - Additional Information**

#### **Gene ID 54890**

### **Other Names**

RNA demethylase ALKBH5, 11411-, Alkylated DNA repair protein alkB homolog 5, Alpha-ketoglutarate-dependent dioxygenase alkB homolog 5, ALKBH5, ABH5, OFOXD1

### Target/Specificity

This ALKBH5 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 302-330 amino acids from the Central region of human ALKBH5.

### **Dilution**

WB~~1:2000 FC~~1:25 IHC-P~~1:100

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  $2-8^{\circ}$ C for up to 2 weeks. For long term storage store at  $-20^{\circ}$ C in small aliquots to prevent freeze-thaw cycles.

## **Precautions**

ALKBH5 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

### **ALKBH5 Antibody (Center) - Protein Information**



Name ALKBH5 {ECO:0000303|PubMed:23177736, ECO:0000312|HGNC:HGNC:25996}

Function Dioxygenase that specifically demethylates N(6)- methyladenosine (m6A) RNA, the most prevalent internal modification of messenger RNA (mRNA) in higher eukaryotes (PubMed: 23177736, PubMed: 24489119, PubMed: 24616105, PubMed: 24778178, PubMed:34048572, PubMed:36944332, PubMed:37257451, PubMed:37369679). Demethylates RNA by oxidative demethylation, which requires molecular oxygen, alpha- ketoglutarate and iron (PubMed: 21264265, PubMed: 23177736, PubMed: 24489119, PubMed: 24616105, PubMed:24778178). Demethylation of m6A mRNA affects mRNA processing, translation and export (PubMed: <u>23177736</u>, PubMed: <u>34048572</u>, PubMed: <u>36944332</u>, PubMed: <u>37257451</u>). Can also demethylate N(6)-methyladenosine in single-stranded DNA (in vitro) (PubMed:24616105). Required for the late meiotic and haploid phases of spermatogenesis by mediating m6A demethylation in spermatocytes and round spermatids: m6A demethylation of target transcripts is required for correct splicing and the production of longer 3'-UTR mRNAs in male germ cells (By similarity). Involved in paraspeckle assembly, a nuclear membraneless organelle, by undergoing liquid-liquid phase separation (PubMed: 37369679, PubMed: 37474102). Paraspeckle assembly is coupled with m6A demethylation of RNAs, such as NEAT1 non-coding RNA (PubMed: 37474102). Also acts as a negative regulator of T-cell development: inhibits gamma-delta T-cell proliferation via demethylation of JAG1 and NOTCH2 transcripts (By similarity). Inhibits regulatory T-cell (Treg) recruitment by mediating demethylation and destabilization of CCL28 mRNAs (By similarity).

#### **Cellular Location**

Nucleus speckle Note=Promotes formation and localizes to paraspeckles, a nuclear membraneless organelle.

#### **Tissue Location**

Widely expressed, with highest expression in lung, followed by testis, pancreas, spleen and ovary

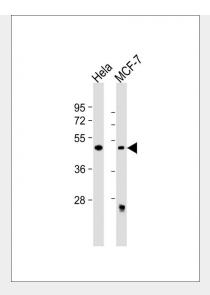
### **ALKBH5 Antibody (Center) - Protocols**

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

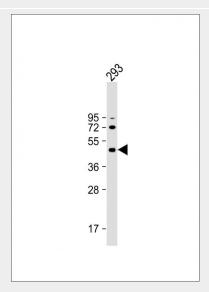
- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## ALKBH5 Antibody (Center) - Images



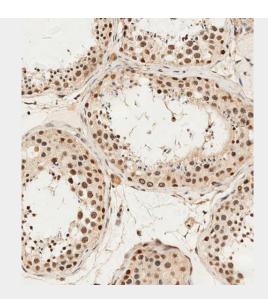


All lanes : Anti-ALKBH5 Antibody (Center) at 1:500 dilution Lane 1: Hela whole cell lysate Lane 2: MCF-7 whole cell lysate Lysates/proteins at 20  $\mu$ g per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 44 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

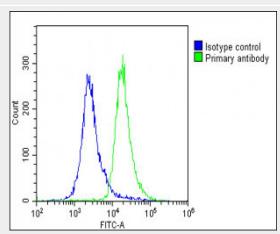


Anti-ALKBH5 Antibody (Center) at 1:2000 dilution  $\pm$  293 whole cell lysate Lysates/proteins at 20  $\mu$ g per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 44 kDa Blocking/Dilution buffer: 5% NFDM/TBST.





AP18410c staining ALKBH5 in human testis tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Samples were incubated with primary antibody (1/100) for 1 hours at room temperature. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



Overlay histogram showing U-2 OS cells stained with AP18410c(green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP18410c, 1:25 dilution) for 60 min at 37 $^{\circ}$ C. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(1583138) at 1/200 dilution for 40 min at 37 $^{\circ}$ C. Isotype control antibody (blue line) was rabbit IgG1 (1 $\mu$ g/1x10 $^{\circ}$ 6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.

# ALKBH5 Antibody (Center) - Background

Probable dioxygenase that requires molecular oxygen, alpha-ketoglutarate and iron (By similarity).

# **ALKBH5 Antibody (Center) - References**

Olsen, J.V., et al. Cell 127(3):635-648(2006) Bi, W., et al. Genome Res. 12(5):713-728(2002)