

**ALKBH3 Antibody (C-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP8682b****Specification**

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**ALKBH3 Antibody (C-term) - Product Information**

Application	IHC-P, WB,E
Primary Accession	<a href="#">O96Q83</a>
Other Accession	<a href="#">Q32L00</a>
Reactivity	Human, Mouse
Predicted	Bovine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	33375
Antigen Region	242-269

**ALKBH3 Antibody (C-term) - Additional Information****Gene ID** 221120**Other Names**

Alpha-ketoglutarate-dependent dioxygenase alkB homolog 3, 11411-, Alkylated DNA repair protein alkB homolog 3, DEPC-1, Prostate cancer antigen 1, ALKBH3, ABH3, DEPC1

**Target/Specificity**

This ALKBH3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 242-269 amino acids from the C-terminal region of human ALKBH3.

**Dilution**

IHC-P~~1:50~100

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**

ALKBH3 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**ALKBH3 Antibody (C-term) - Protein Information**

**Name** ALKBH3 ([HGNC:30141](#))

**Function** Dioxygenase that mediates demethylation of DNA and RNA containing 1-methyladenosine (m1A) (PubMed:[12486230](#), PubMed:[12594517](#), PubMed:[16174769](#), PubMed:[26863196](#), PubMed:[26863410](#)). Repairs alkylated DNA containing 1-methyladenosine (m1A) and 3-methylcytosine (m3C) by oxidative demethylation (PubMed:[12486230](#), PubMed:[12594517](#), PubMed:[16174769](#), PubMed:[25944111](#)). Has a strong preference for single-stranded DNA (PubMed:[12486230](#), PubMed:[12594517](#), PubMed:[16174769](#), PubMed:[20714506](#)). Able to process alkylated m3C within double-stranded regions via its interaction with ASCC3, which promotes DNA unwinding to generate single-stranded substrate needed for ALKBH3 (PubMed:[22055184](#)). Can repair exocyclic 3,N4-ethenocytosine adducts in single-stranded DNA (PubMed:[25797601](#)). Also acts on RNA (PubMed:[12594517](#), PubMed:[16174769](#), PubMed:[16858410](#), PubMed:[26863196](#), PubMed:[26863410](#)). Demethylates N(1)-methyladenosine (m1A) RNA, an epigenetic internal modification of messenger RNAs (mRNAs) highly enriched within 5'-untranslated regions (UTRs) and in the vicinity of start codons (PubMed:[26863196](#), PubMed:[26863410](#)). Requires molecular oxygen, alpha-ketoglutarate and iron (PubMed:[16858410](#), PubMed:[22055184](#)).

**Cellular Location**

Nucleus. Cytoplasm Note=Colocalizes with ASCC2 and ASCC3 in nuclear foci when cells have been exposed to alkylating agents that cause DNA damage (PubMed:29144457). Predominantly localizes to the nucleus

**Tissue Location**

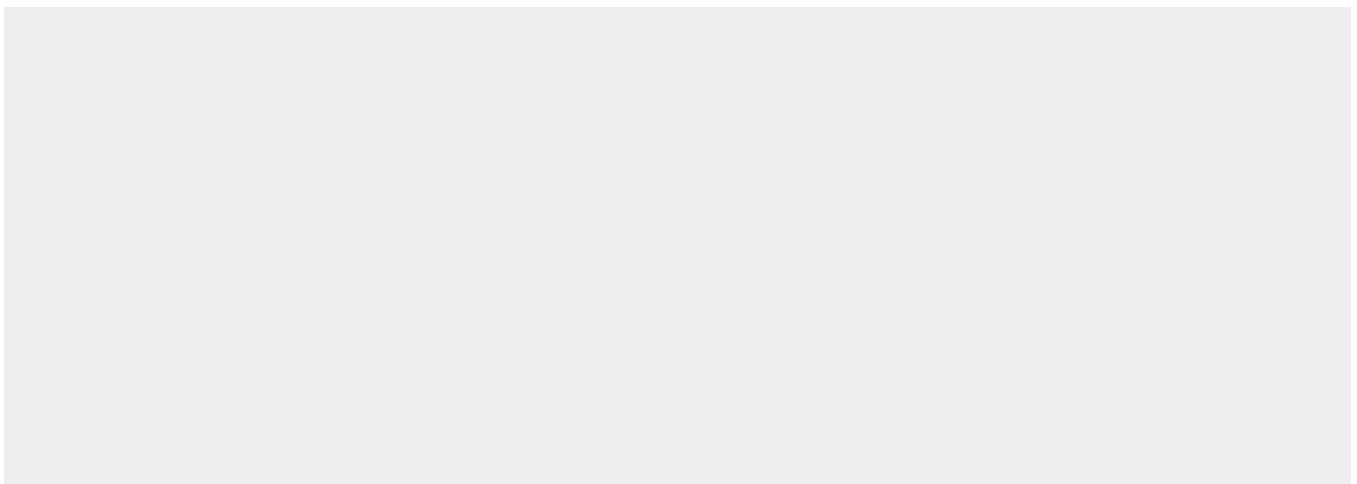
Ubiquitous. Detected in heart, pancreas, skeletal muscle, thymus, testis, ovary, spleen, prostate, small intestine, peripheral blood leukocytes, urinary bladder and colon

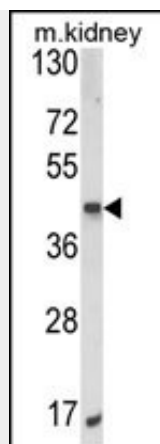
**ALKBH3 Antibody (C-term) - Protocols**

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

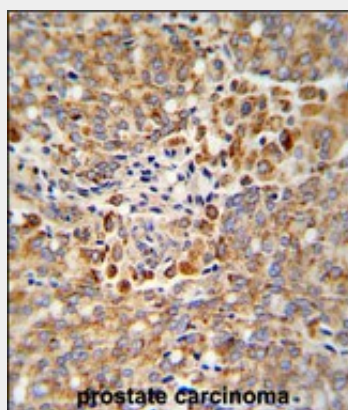
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**ALKBH3 Antibody (C-term) - Images**





Western blot analysis of ALKBH3 Antibody (C-term) (Cat. #AP8682b) in mouse kidney tissue lysates (35ug/lane). ALKBH3 (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human prostate carcinoma reacted with ALKBH3 Antibody (C-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

#### **ALKBH3 Antibody (C-term) - Background**

The Escherichia coli AlkB protein protects against the cytotoxicity of methylating agents by repair of the specific DNA lesions generated in single-stranded DNA. ALKBH2 (MIM 610602) and ALKBH3 are E. coli AlkB homologs that catalyze the removal of 1-methyladenine and 3-methylcytosine.

#### **ALKBH3 Antibody (C-term) - References**

Sundheim,O., et.al., EMBO J. 25 (14), 3389-3397 (2006)