

ABH2 / ALKBH2 Antibody (C-Terminus)
Rabbit Polyclonal Antibody
Catalog # ALS13975**Specification****ABH2 / ALKBH2 Antibody (C-Terminus) - Product Information**

Application	WB, IHC
Primary Accession	Q6NS38
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	29kDa KDa

ABH2 / ALKBH2 Antibody (C-Terminus) - Additional Information**Gene ID** 121642**Other Names**

Alpha-ketoglutarate-dependent dioxygenase alkB homolog 2, 1.14.11.33, Alkylated DNA repair protein alkB homolog 2, DNA oxidative demethylase ALKBH2, Oxy DC1, ALKBH2, ABH2

Target/Specificity

Human ALKBH2

Reconstitution & Storage

Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles. Store undiluted.

Precautions

ABH2 / ALKBH2 Antibody (C-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

ABH2 / ALKBH2 Antibody (C-Terminus) - Protein Information**Name** ALKBH2**Synonyms** ABH2 {ECO:0000303|PubMed:16174769}**Function**

Dioxygenase that repairs alkylated nucleic acid bases by direct reversal oxidative dealkylation. Can process both double- stranded (ds) and single-stranded (ss) DNA substrates, with a strong preference for dsDNA (PubMed: [12486230](http://www.uniprot.org/citations/12486230), PubMed: [12594517](http://www.uniprot.org/citations/12594517), PubMed: [16174769](http://www.uniprot.org/citations/16174769), PubMed: [20714506](http://www.uniprot.org/citations/20714506), PubMed: [25797601](http://www.uniprot.org/citations/25797601), PubMed: [23972994](http://www.uniprot.org/citations/23972994)). Uses molecular oxygen, 2-oxoglutarate and iron as cofactors to oxidize the alkyl groups that are subsequently released as aldehydes, regenerating the

undamaged bases. Probes the base pair stability, locates a weakened base pair and flips the damaged base to accommodate the lesion in its active site for efficient catalysis (PubMed:18432238, PubMed:22659876). Repairs monoalkylated bases, specifically N1- methyladenine and N3-methylcytosine, as well as higher order alkyl adducts such as bases modified with exocyclic bridged adducts known as etheno adducts including 1,N6-ethenoadenine, 3,N4-ethenocytosine and 1,N2-ethenoguanine (PubMed:12486230, PubMed:12594517, PubMed:16174769, PubMed:20714506, PubMed:25797601, PubMed:23972994, PubMed:26408825). Acts as a gatekeeper of genomic integrity under alkylation stress. Efficiently repairs alkylated lesions in ribosomal DNA (rDNA). These lesions can cause ss- and dsDNA strand breaks that severely impair rDNA transcription (PubMed:23972994). In a response mechanism to DNA damage, associates with PCNA at replication forks to repair alkylated adducts prior to replication (PubMed:19736315, PubMed:26408825).

Cellular Location

Nucleus. Nucleus, nucleolus. Nucleus, nucleoplasm. Note=Relocates to the replication foci during S-phase.

Tissue Location

Detected in colon, small intestine, ovary, testis, prostate, skeletal muscle, heart, liver and urinary bladder

Volume

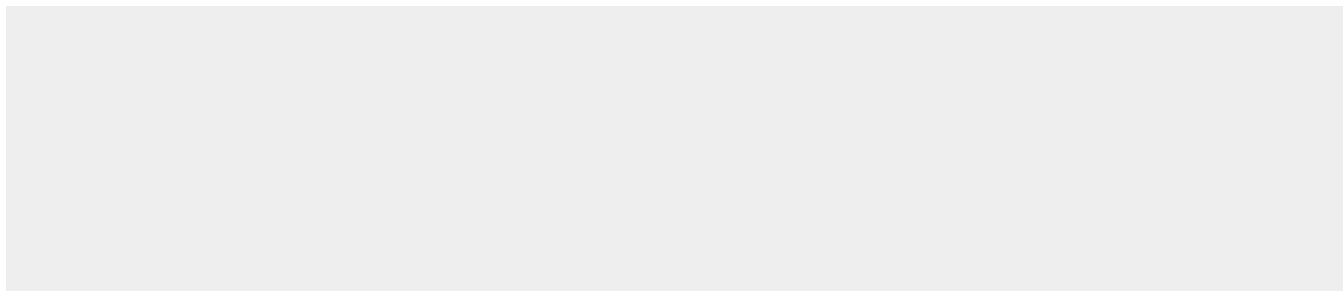
50 µl

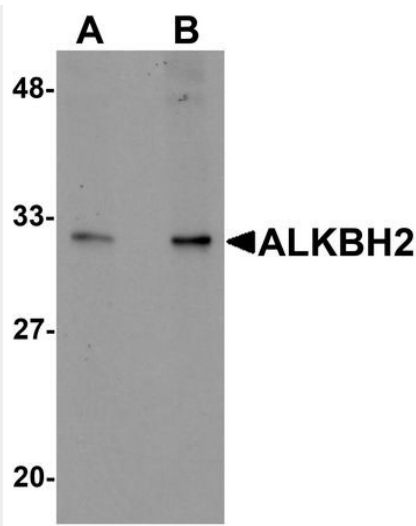
ABH2 / ALKBH2 Antibody (C-Terminus) - Protocols

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

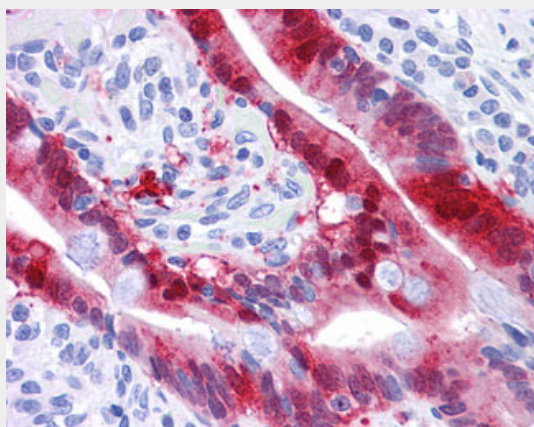
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

ABH2 / ALKBH2 Antibody (C-Terminus) - Images





Western blot analysis of ALKBH2 in human kidney tissue lysate with ALKBH2 antibody at (A) 1 and...



Anti-ALKBH2 antibody IHC of human small intestine.

ABH2 / ALKBH2 Antibody (C-Terminus) - Background

Dioxygenase that repairs alkylated DNA and RNA containing 1-methyladenine and 3-methylcytosine by oxidative demethylation. Can also repair alkylated DNA containing 1-ethenoadenine (in vitro). Has strong preference for double-stranded DNA. Has low efficiency with single-stranded substrates. Requires molecular oxygen, alpha-ketoglutarate and iron.

ABH2 / ALKBH2 Antibody (C-Terminus) - References

Lin Y.,et al.Submitted (SEP-2004) to the EMBL/GenBank/DDBJ databases.
Tsujikawa K.,et al.J. Cell. Mol. Med. 11:1105-1116(2007).
Scherer S.E.,et al.Nature 440:346-351(2006).
Duncan T.,et al.Proc. Natl. Acad. Sci. U.S.A. 99:16660-16665(2002).
Aas P.A.,et al.Nature 421:859-863(2003).