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ALKBH2 antibody - middle region
Rabbit Polyclonal Antibody
Catalog # AI13326

Specification

ALKBH2 antibody - middle region - Product Information

Application	**WB**
Primary Accession	Q6NS38
Other Accession	NM_001001655, NP_001001655
Reactivity	**Human, Mouse, Rat, Rabbit, Horse, Bovine, Guinea Pig, Dog**
Predicted	**Human, Rat, Pig, Dog**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**29kDa KDa**

ALKBH2 antibody - middle region - Additional Information

Gene ID 121642

Alias Symbol	**ABH2, MGC90512, hABH2**

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

Format
Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.

Reconstitution & Storage
Add 50 ul of distilled water. Final anti-ALKBH2 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.

Precautions
ALKBH2 antibody - middle region is for research use only and not for use in diagnostic or therapeutic procedures.

ALKBH2 antibody - middle region - 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, PubMed:12594517, PubMed:<a href="http://www.uniprot.org/citations/16174769"

target="_blank">16174769, PubMed:20714506, PubMed:25797601, PubMed: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

ALKBH2 antibody - middle region - 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

ALKBH2 antibody - middle region - Images

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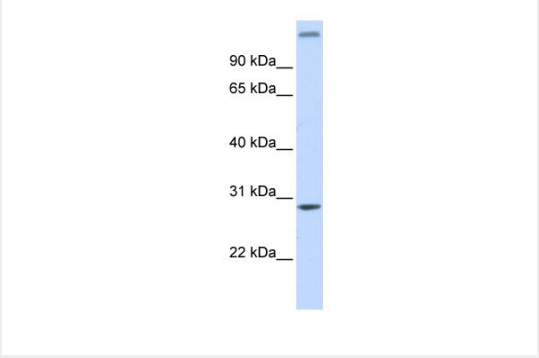

WB Suggested Anti-ALKBH2 Antibody Titration: 0.2-1 µg/ml
ELISA Titer: 1:62500
Positive Control: Human brain

ALKBH2 antibody - middle region - 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).
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