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# ALKBH2 antibody - middle region

Rabbit Polyclonal Antibody
Catalog # AI13326

## Product Information

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| **Application** | WB |
| **Primary Accession** | Q6NS38 |
| **Other Accession** | NM_001001655, NP_001001655 |
| **Reactivity** | Human, Mouse, Rat, Rabbit, Zebrafish, Dog, Guinea Pig, Horse, Bovine |
| **Predicted** | Human, Rat, Pig, Dog |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 29322 |

## Additional Information

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| **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. |

## Protein Information

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| **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:16174769, PubMed:20714506, PubMed:23972994, PubMed:25797601). Uses molecular oxygen, 2-oxoglutarate and iron as cofactors to oxidize the alkyl groups that are subsequently released as aldehydes, regenerating the undamaged bases. |

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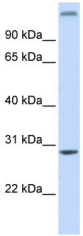
| | Probes the base pair stability, locates a weakened base pair and flips the damaged base to accommodate the lesion in its active site for efficient catalysis (PubMed:18432238, PubMed:22659876). Repairs monoalkylated bases, specifically N1- methyladenine and N3-methylcytosine, as well as higher order 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:23972994, PubMed:25797601, 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 |

## 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).


## Images




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