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# Recombinant Anti-ALKBH2 Rabbit mAb

Catalog # AP95405

## Product Information

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| **Application** | WB, FC |
| **Primary Accession** | Q6NS38 |
| **Reactivity** | Human, Mouse, Rat |
| **Host** | Rabbit |
| **Clonality** | Monoclonal |
| **Calculated MW** | 29322 |

## Additional Information

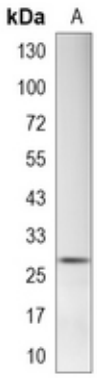
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| **Gene ID** | 121642 |
| **Other Names** | ABH2; Alpha-ketoglutarate-dependent dioxygenase alkB homolog 2; Alkylated DNA repair protein alkB homolog 2; DNA oxidative demethylase ALKBH2; Oxy DC1 |
| **Target/Specificity** | KLH-conjugated synthetic peptide encompassing a sequence within human ALKBH2 protein. The exact sequence is proprietary. |
| **Dilution** | WB~~WB (1/500 - 1/1000) FC~~1:10~50 |
| **Format** | Liquid in PBS, pH 7.3, 50% glycerol, 0.05% BSA, and 0.05% Proclin300. |
| **Storage** | Store at -20 °C.Stable for 12 months from date of receipt |

## 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. 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, |

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| | 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 |

## Images




Western blot analysis of ALKBH2 expression in Hela (A) whole cell lysates. (Predicted band size: 29 kD; Observed band size: 29 kD)

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.