

## Recombinant Human ALKBH2 protein, His-tagged

**Cat. No.** ALKBH2-26040TH    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant Human ALKBH2(1-261aa) fused with His tag at N-terminal was expressed in E. coli.                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Description</b>      | Alpha-ketoglutarate-dependent dioxygenase alkB homolog 2, also known ALKBH2, belongs to the ALKB family. Expressed in heart, colon, liver, testis, ovary, prostate and small intestine, ALKBH2 uses iron as a cofactor and functions as a dioxygenase that catalyzes the repair of alkylated DNA and RNA containing 1-methyladenine and 3-meth-ylcytosine. ALKBH2 is functionally activated by ascorbate and requires oxygen and alpha-ketoglutarate for enzymatic activity. |
| <b>Form</b>             | Liquid. In 20mM Tris-HCl buffer (pH 8.0) containing 1mM DTT, 30% glycerol                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Molecular Mass</b>   | 31.4kDa (281aa), confirmed by MALDI-TOF                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>AA Sequence</b>      | MGSSHHHHHH SSGLVPRGSHVLFGKAEADE IFQELEKEVE YFTGALARVQ<br>VFGKWHSVPR KQATYGDAGL TYTFSGLTLS PKPWIPVLER IRDHVSGVTG<br>QTFNFVLINRYKDGCDHIGE HRDDERELAP GSPIASVSFG ACRDFVFRHK<br>DSRGKSPSRR VAVVRLPLAH GSLLMMNHPT NTHWYHSLPV RKKVLAPRVN<br>MDRFLVKGAQ GLLLRKQEEQ EPTGEEPAVL GGDKESTRKR PRREAPGNGG<br>HSAGPSWRHI RAEGLDCSYT LTFRKILLTK K                                                                                                                                           |

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|                            |                                                                                                                                                                                                                    |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Purity</b>              | > 90% by SDS - PAGE                                                                                                                                                                                                |
| <b>Storage</b>             | Can be stored at +4 centigrade short term (1-2 weeks). For long term storage, aliquot and store at -20 centigrade or -70 centigrade. Avoid repeated freezing and thawing cycles.                                   |
| <b>Concentration</b>       | 0.5 mg/ml (determined by Bradford assay)                                                                                                                                                                           |
| <b>GENE INFORMATION</b>    |                                                                                                                                                                                                                    |
| <b>Gene Name</b>           | ALKBH2 alkB, alkylation repair homolog 2 (E. coli) [ Homo sapiens ]                                                                                                                                                |
| <b>Official Symbol</b>     | ALKBH2                                                                                                                                                                                                             |
| <b>Synonyms</b>            | ALKBH2; alkB, alkylation repair homolog 2 (E. coli); alpha-ketoglutarate-dependent dioxygenase alkB homolog 2; ABH2; MGC90512; oxy DC1; 2OG-Fe(II) oxy DC1; alkylated DNA repair protein alkB homolog 2; FLJ99103; |
| <b>Gene ID</b>             | 121642                                                                                                                                                                                                             |
| <b>mRNA Refseq</b>         | NM_001001655                                                                                                                                                                                                       |
| <b>Protein Refseq</b>      | NP_001001655                                                                                                                                                                                                       |
| <b>MIM</b>                 | 610602                                                                                                                                                                                                             |
| <b>UniProt ID</b>          | Q6NS38                                                                                                                                                                                                             |
| <b>Chromosome Location</b> | 12q24.11                                                                                                                                                                                                           |
| <b>Pathway</b>             | ABH2 mediated Reversal of Alkylation Damage, organism-specific biosystem; DNA                                                                                                                                      |

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Damage Reversal, organism-specific biosystem; DNA Repair, organism-specific biosystem; Reversal of Alkylation Damage By DNA Dioxygenases, organism-specific biosystem;

**Function**

DNA-N1-methyladenine dioxygenase activity; cytosine C-5 DNA demethylase activity; cytosine C-5 DNA demethylase activity; ferrous iron binding; metal ion binding; oxidoreductase activity; oxidoreductase activity, acting on single donors with incorporation of molecular oxygen, incorporation of two atoms of oxygen;

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