

## Recombinant Human ALKBH3, His-tagged

**Cat. No.** ALKBH3-26501TH    **Lot. No.** (See product label)

### SPECIFICATION

|                           |                                                                                                                                                                                                                                                                                                             |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b>   | Recombinant full length Human ALKBH3 with N terminal His and DDDDK tags; 325 amino acids with tags, Predicted MWt 37.9 kDa.                                                                                                                                                                                 |
| <b>Species</b>            | Human                                                                                                                                                                                                                                                                                                       |
| <b>Source</b>             | E.coli                                                                                                                                                                                                                                                                                                      |
| <b>ProteinLength</b>      | 286 amino acids                                                                                                                                                                                                                                                                                             |
| <b>Description</b>        | The Escherichia coli AlkB protein protects against the cytotoxicity of methylating agents by repair of the specific DNA lesions generated in single-stranded DNA. ALKBH2 (MIM 610602) and ALKBH3 are E. coli AlkB homologs that catalyze the removal of 1-methyladenine and 3-methylcytosine (Duncan et al. |
| <b>Conjugation</b>        | HIS                                                                                                                                                                                                                                                                                                         |
| <b>Molecular Weight</b>   | 37.900kDa inclusive of tags                                                                                                                                                                                                                                                                                 |
| <b>Tissue specificity</b> | Ubiquitous. Detected in heart, pancreas, skeletal muscle, thymus, testis, ovary, spleen, prostate, small intestine, peripheral blood leukocytes, urinary bladder and colon.                                                                                                                                 |
| <b>Form</b>               | Liquid                                                                                                                                                                                                                                                                                                      |
| <b>Purity</b>             | >95% by SDS-PAGE                                                                                                                                                                                                                                                                                            |

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|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Storage buffer</b>           | Preservative: None<br>Constituents: 10% Glycerol, 0.1M Sodium chloride, 20mM Tris HCl, 2mM DTT, pH 8.0                                                                                                                                                                                                                                                   |
| <b>Storage</b>                  | Store at +4°C short term (1-2 weeks). Aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.                                                                                                                                                                                                                                          |
| <b>Sequences of amino acids</b> | MRGSHHHHHHGMASMTGGQQMGRDLYDDDDKDRWGSELDMEEKRRRRARVQGA<br>WAAPVKSQAIAQPATTAKSHLHQKPGQTWKNKEHHLSDREFVFKPQQVVRRAPE<br>PRVIDREGVYEISLSPTGVSRVCLYPGFVDVKEADWILEQLCQDVPWKQRTGIREDI<br>TYQQPRLTAWYGELPYTYSRITMEPNPHWHPVLRTLKNRIEENTGHTFNSLLCNLYR<br>NEKDSVDWHSDDPSLGRCPIIASLSFGATRTFEMRKKPPPEENGDYTYVERVKIPL<br>DHGTLIMEGATQADWQHRVPKEYHSREPRVNLTFRTVYPDPARGAPW |
| <b>Sequence Similarities</b>    | Belongs to the alkB family. Contains 1 Fe2OG dioxygenase domain.                                                                                                                                                                                                                                                                                         |

## GENE INFORMATION

|                        |                                                                                                                        |
|------------------------|------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | <a href="#">ALKBH3 alkB, alkylation repair homolog 3 (E. coli) [ Homo sapiens ]</a>                                    |
| <b>Official Symbol</b> | <a href="#">ALKBH3</a>                                                                                                 |
| <b>Synonyms</b>        | ALKBH3; alkB, alkylation repair homolog 3 (E. coli); alpha-ketoglutarate-dependent dioxygenase alkB homolog 3; DEPC 1; |
| <b>Gene ID</b>         | <a href="#">221120</a>                                                                                                 |
| <b>mRNA Refseq</b>     | <a href="#">NM_139178</a>                                                                                              |
| <b>Protein Refseq</b>  | <a href="#">NP_631917</a>                                                                                              |

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|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MIM</b>                 | 610603                                                                                                                                                                                                                                               |
| <b>Uniprot ID</b>          | Q96Q83                                                                                                                                                                                                                                               |
| <b>Chromosome Location</b> | 11p11.2                                                                                                                                                                                                                                              |
| <b>Pathway</b>             | ABH3 mediated Reversal of Alkylation Damage, organism-specific biosystem; DNA Damage Reversal, organism-specific biosystem; DNA Repair, organism-specific biosystem; Reversal of Alkylation Damage By DNA Dioxygenases, organism-specific biosystem; |
| <b>Function</b>            | DNA-N1-methyladenine dioxygenase activity; L-ascorbic acid binding; cytosine C-5 DNA demethylase activity; ferrous iron binding; metal ion binding;                                                                                                  |

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