

## Recombinant ALKBH5 protein

**Catalog No:** 31589, 31989**Expressed In:** Baculovirus**Quantity:** 20, 1000 µg**Concentration:** 0.3 µg/µl**Source:** Human

**Buffer Contents:** Recombinant ALKBH5 protein is supplied at a concentration of 0.3 µg/µl in 25 mM HEPES pH 7.5, 300 mM NaCl, 5% glycerol, 0.04% Triton X-100, 0.2 mM TCEP.

**Background:** *N6-methylated adenine (m6A)* is prevalent in nearly all RNA types and can be found in all organisms from bacteria to humans. It preferentially appears around stop codons and within long internal exons in mammalian messenger RNAs. m6A plays an important role in the efficiency of mRNA splicing, processing, translation efficiency, editing and mRNA stability. m6A also appears in other RNA molecules, such as primary miRNA (pri-miRNAs).

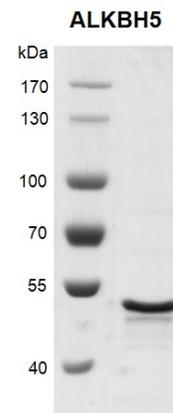
ALKBH5 (AlkB Homolog 5, RNA Demethylase, also known as OFOXD1, ABH5) specifically demethylates m6A RNA. ALKBH5 significantly affects mRNA export and RNA metabolism as well as the assembly of mRNA processing factors in nuclear speckles via demethylation activity.

**Protein Details:** Recombinant ALKBH5 protein was expressed in a baculovirus expression system as the full length protein (accession number NP\_060228.3) with an N-terminal FLAG tag. The molecular weight of ALKBH5 is 45.5 kDa.

**Application Notes:** Recombinant ALKBH5 protein is suitable for use in enzyme kinetics, inhibitor screening, and selectivity profiling.

3 µM m6A ssDNA oligos (DNA sequence: 5'-GTTGCCTGTTTCGTGTTGG/m6A/CTTGCCTGT-3') were incubated with ALKBH5 protein in reaction buffer including 50 mM HEPES pH 7.5, 100 µM 2OG, 100 µM Ascorbate, 50 µM (NH<sub>4</sub>)<sub>2</sub>Fe(SO<sub>4</sub>)<sub>2</sub>·6H<sub>2</sub>O and 1 mM TCEP for 2 hours at room temperature. Dot-Blot was used for activity detection.

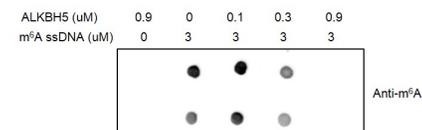
**Storage and Guarantee:** Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product is guaranteed for 6 months from date of arrival.



**Recombinant ALKBH5 protein** run on an 8% SDS-PAGE gel stained with Coomassie Blue.

MW: 45.5 kDa

Purity: > 85%



**Recombinant ALKBH5 protein activity.** 3 µM m6A ssDNA oligos (sequence: 5'-GTTGCCTGTTTCGTGTTGG/m6A/CTTGCCTGT-3') incubated with ALKBH5 protein in reaction buffer for 2 hr at RT. Reaction products spotted onto positively charged nylon membrane were detected with Anti-m6A antibody (#31495). ALKBH5 only was used as negative control.