

Recombinant ALKBH2 protein

Catalog No: 81129, 81829

Lot No: 24318002

Expressed In: *E. coli*

Quantity: 100, 1000 µg

Concentration: 0.6 µg/µl

Source: Human

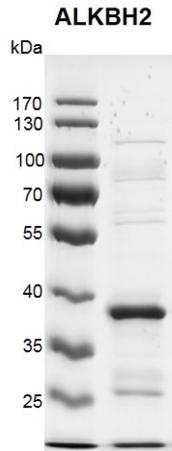
Buffer Contents: Recombinant ALKBH2 protein is supplied in 25 mM Tris pH 8.0, 300 mM NaCl, 20% glycerol, 0.5 mM TCEP.

Background: ALKBH2 (AlkB Homolog 2, Alpha-Ketoglutarate Dependent Dioxygenase) is a member of ALKBH protein family. It can repair alkylated DNA and RNA containing 1-methyladenine and 3-methylcytosine by oxidative demethylation. ALKBH2 can also repair alkylated DNA containing 1-ethenoadenine (in vitro). Has strong preference for double-stranded DNA. It can release modified bases from both DNA and RNA. The oxidative demethylation requires molecular oxygen, alpha-ketoglutarate and iron.

Protein Details: Full length ALKBH2 protein (accession number NP_001001655.1) was expressed in *E. coli* cells with an N-terminal 6xHis-Tag. The molecular weight of ALKBH2 is 33.1 kDa.

Application Notes: Recombinant ALKBH2 protein is suitable for use in enzyme kinetics, inhibitor screening, and selectivity profiling.

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.

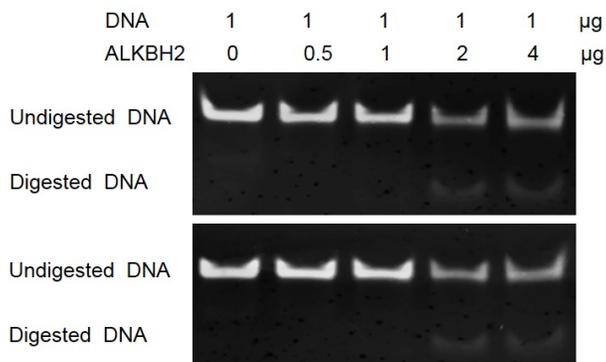


Recombinant ALKBH2 protein

10% SDS-PAGE Coomassie staining

MW: 33.1 kDa

Purity: >82%



ALKBH2 dioxygenase activity assay

1 μg of ssDNA oligos (5'-AAAGCAG(1mA)

ATTCGAAAAAGCGAAA-3') was incubated with 0 μg, 0.5

μg, 1 μg, 2 μg, 4 μg of ALKBH2 in 50 μl reaction system

including 50 mM HEPES-NaOH pH 8.0, 50 μM Fe(NH₄)₂

(SO₄)₂, 1 mM 2-oxoglutarate, 2 mM ascorbate and 1 mM

TCEP for 30 min at 37°C. Then ssDNA oligos were

annealed with equimolar of non-methylated complement

strand followed by 1 μg EcoRI digestion for 45 min at 37°C.

1/4 reaction products were run on a 20% Native PAGE gel

and stained by ethidium bromide.