

ALKBH4 (A-15): sc-244889

BACKGROUND

ALKBH4 (alkB, alkylation repair homolog 4), also known as ABH4, is a 302 amino acid protein belonging to the alkB family. ALKBH4 is one of many homologs of the Escherichia coli protein AlkB. AlkB functions to protect DNA and RNA against damage from environmental methylating compounds by directly reversing 1-methyladenine (1-meA) and 3-methylcytosine (3-meC) cytotoxic alkylation lesions in DNA and RNA. The enzyme acts by oxidative demethylation, utilizing ferrous iron and alpha-ketoglutarate as cofactors, 2-oxoglutarate as a co-substrate and molecular oxygen as the oxidizing agent. ALKBH4 exists as two alternatively spliced isoforms and is encoded by a gene located on human chromosome 7, which houses over 1,000 genes and comprises nearly 5% of the human genome.

REFERENCES

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- Yang, C.G., et al. 2008. Crystal structures of DNA/RNA repair enzymes AlkB and ABH2 bound to dsDNA. *Nature.* 452: 961-965.

CHROMOSOMAL LOCATION

Genetic locus: ALKBH4 (human) mapping to 7q22.1; Alkbh4 (mouse) mapping to 5 G2.

SOURCE

ALKBH4 (A-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ALKBH4 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-244889 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

ALKBH4 (A-15) is recommended for detection of ALKBH4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other ALKBH family members.

ALKBH4 (A-15) is also recommended for detection of ALKBH4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ALKBH4 siRNA (h): sc-89850, ALKBH4 siRNA (m): sc-141021, ALKBH4 shRNA Plasmid (h): sc-89850-SH, ALKBH4 shRNA Plasmid (m): sc-141021-SH, ALKBH4 shRNA (h) Lentiviral Particles: sc-89850-V and ALKBH4 shRNA (m) Lentiviral Particles: sc-141021-V.

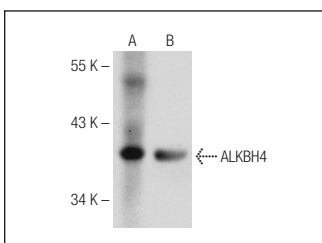
Molecular Weight of ALKBH4: 34 kDa.

Positive Controls: rat liver extract: sc-2395 or human liver tissue extract.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ALKBH4 (A-15): sc-244889. Western blot analysis of ALKBH4 expression in rat liver (A) and human liver (B) tissue extracts.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.