

# ALKBH6 (W-14): sc-241800

## BACKGROUND

ALKBH6 (alkB, alkylation repair homolog 6), also known as probable  $\alpha$ -ketoglutarate-dependent dioxygenase ABH6 or alkylated DNA repair protein alkB homolog 6, is a 238 amino acid protein belonging to the AlkB family. Located on human chromosome 19q13.12, the ALKBH6 gene is one of eight known human ALKB genes, which include ALKB, ALKBH2, ALKBH3, ALKBH4, ALKBH5, ALKBH7 and ALKBH8. Existing as three alternatively spliced isoforms, ALKBH6 is widely expressed, with high expression in testis and pancreas, and localizes to cytoplasm and nucleus. ALKBH6 contains an Fe2OG dioxygenase domain, suggesting its function as a dioxygenase, which requires molecular oxygen,  $\alpha$ -ketoglutarate and iron. ALKBH6 binds one Fe<sup>2+</sup> ion per subunit and participates in oxidoreductase activities.

## REFERENCES

- Lee, D.H., et al. 2005. Repair of methylation damage in DNA and RNA by mammalian AlkB homologues. *J. Biol. Chem.* 280: 39448-39459.
- Mishina, Y., et al. 2006. Oxidative dealkylation DNA repair mediated by the mononuclear non-heme iron AlkB proteins. *J. Inorg. Biochem.* 100: 670-678.
- Tsujikawa, K., et al. 2007. Expression and sub-cellular localization of human ABH family molecules. *J. Cell. Mol. Med.* 11: 1105-1116.
- Tsukamoto, Y., et al. 2008. Genome-wide analysis of DNA copy number alterations and gene expression in gastric cancer. *J. Pathol.* 216: 471-482.
- Loenarz, C., et al. 2008. Expanding chemical biology of 2-oxoglutarate oxygenases. *Nat. Chem. Biol.* 4: 152-156.
- Shimada, K., et al. 2009. A novel human AlkB homologue, ALKBH8, contributes to human bladder cancer progression. *Cancer Res.* 69: 3157-3164.
- Uchida, M., et al. 2010. Genomic profiling of gastric carcinoma *in situ* and adenomas by array-based comparative genomic hybridization. *J. Pathol.* 221: 96-105.
- SWISS-PROT/TrEMBL (Q3KRA9). World Wide Web URL: <http://www.uniprot.org/uniprot/Q3KRA9>

## CHROMOSOMAL LOCATION

Genetic locus: ALKBH6 (human) mapping to 19q13.12.

## SOURCE

ALKBH6 (W-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ALKBH6 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-241800 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

ALKBH6 (W-14) is recommended for detection of ALKBH6 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

ALKBH6 (W-14) is also recommended for detection of ALKBH6 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ALKBH6 siRNA (h): sc-97783, ALKBH6 shRNA Plasmid (h): sc-97783-SH and ALKBH6 shRNA (h) Lentiviral Particles: sc-97783-V.

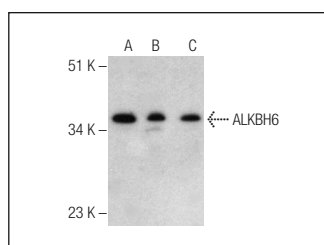
Molecular Weight of ALKBH6: 26 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HuT 78 whole cell lysate: sc-2208 or MOLT-4 cell lysate: sc-2233.

## 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



ALKBH6 (W-14): sc-241800. Western blot analysis of ALKBH6 expression in Jurkat (A), HuT 78 (B) and MOLT-4 (C) whole cell lysates.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.