BACKGROUND
ALKBH3 (alkB, alkylation repair homolog 3), also known as ABH3, PCA1 (prostate cancer antigen 1), DEPC1 or DEPC-1, is a 286 amino acid member of the AlkB family of proteins and functions as a dioxygenase with a preference for RNA and single stranded DNA substrates. ALKBH3 is one of many homologs of the Escherichia coli protein, AlkB. ALKBH3 is expressed in a wide variety of tissues and localizes to the cytoplasm and the nucleus. It associates with iron and 2-oxoglutarate, coupling the oxidation of substrates to the conversion of 2-oxoglutarate into succinate and CO₂. Via oxidative demethylation, ALKBH3 repairs 1-methyladenine and 3-methylcytosine lesions in alkylated DNA and RNA. Its activity is stimulated by ascorbate. Two isoforms exist for ALKBH3 due to alternative splicing of the gene.

REFERENCES

CHROMOSOMAL LOCATION
Genetic locus: ALKBH3 (human) mapping to 11p11.2; Alkbh3 (mouse) mapping to 2 E1.

SOURCE
ALKBH3 (B-7) is a mouse monoclonal antibody raised against amino acids 1-270 mapping at the N-terminus of ALKBH3 of human origin.

PRODUCT
Each vial contains 200 μg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ALKBH3 (B-7) is available conjugated to agarose (sc-376520 AF647), Alexa Fluor® 594 (sc-376520 AF594) or Alexa Fluor® 647 (sc-376520 AF647), 200 μg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376520 AF680) or Alexa Fluor® 790 (sc-376520 AF790), 200 μg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS
ALKBH3 (B-7) is recommended for detection of ALKBH3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for ALKBH3 siRNA (h): sc-96711, ALKBH3 siRNA (m): sc-141020, ALKBH3 shRNA Plasmid (h): sc-96711-SH, ALKBH3 shRNA Plasmid (m): sc-141020-SH, ALKBH3 shRNA (h) Lentiviral Particles: sc-96711-V and ALKBH3 shRNA (m) Lentiviral Particles: sc-141020-V.

Molecular Weight of ALKBH3: 33 kDa.

Positive Controls: HEL 92.1.7 cell lysate: sc-2270 or K-562 whole cell lysate: sc-2203 or DU 145 cell lysate: sc-2268.

RECOMMENDED SUPPORT REAGENTS
To ensure optimal results, the following support reagents are recommended:

DATA

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

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

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

SANTA CRUZ BIOTECHNOLOGY, INC.
ALKBH3 (B-7): sc-376520

BACKGROUND
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PRODUCT
Each vial contains 200 μg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ALKBH3 (B-7) is available conjugated to agarose (sc-376520 AC), 500 μg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376520 HRP), 200 μg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376520 PE), fluorescein (sc-376520 FITC), Alexa Fluor® 488 (sc-376520 AF488), Alexa Fluor® 546 (sc-376520 AF546), Alexa Fluor® 594 (sc-376520 AF594) or Alexa Fluor® 647 (sc-376520 AF647), 200 μg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376520 AF680) or Alexa Fluor® 790 (sc-376520 AF790), 200 μg/ml, for Near-Infrared (NIR) WB, IF and FCM.

ALKBH3 (B-7): sc-376520. Western blot analysis of ALKBH3 expression in K-562 (A), HEL 92.1.7 (B), DU 145 (C), M1 (D) and C2C12 (E) whole cell lysates.

ALKBH3 (B-7): sc-376520. Immunofluorescence staining of methylated HeLa cells showing nuclear and cytoplasmic localization.

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

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

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