

AOF1 (5E10C1): sc-517222

BACKGROUND

AOF1 (amine-oxidase flavin-containing domain 1), whose alternative names include KDM1B (lysine (K)-specific demethylase 1B) or LSD2 (lysine-specific histone demethylase 2), is an 823 amino acid nuclear protein belonging to the flavin monoamine oxidase family. As a histone demethylase, AOF1 specifically demethylates Lys4 of histone H3, a marker for epigenetic transcriptional activation, by interacting with a long stretch of the H3 N-terminal tail of mono- and dimethylated Lys4. Existing as three alternatively spliced isoforms, AOF1 is required for *de novo* DNA methylation of some imprinted genes in oocytes and contains a single SWIRM domain that is implicated in chromatin regulation. AOF1 contains one CW-type zinc finger and is encoded by a gene located on human chromosome 6p22.3.

REFERENCES

1. Shi, Y., et al. 2004. Histone demethylation mediated by the nuclear amine oxidase homolog LSD1. *Cell* 119: 941-953.
2. Culhane, J.C. and Cole, P.A. 2007. LSD1 and the chemistry of histone demethylation. *Curr. Opin. Chem. Biol.* 11: 561-568.
3. Forneris, F., et al. 2009. New roles of flavoproteins in molecular cell biology: histone demethylase LSD1 and chromatin. *FEBS J.* 276: 4304-4312.
4. Karytinos, A., et al. 2009. A novel mammalian flavin-dependent histone demethylase. *J. Biol. Chem.* 284: 17775-17782.

CHROMOSOMAL LOCATION

Genetic locus: KDM1B (human) mapping to 6p22.3.

SOURCE

AOF1 (5E10C1) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 6-129 of AOF1 of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

AOF1 (5E10C1) is recommended for detection of AOF1 of 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), flow cytometry (1 µg per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for AOF1 siRNA (h): sc-95467, AOF1 shRNA Plasmid (h): sc-95467-SH and AOF1 shRNA (h) Lentiviral Particles: sc-95467-V.

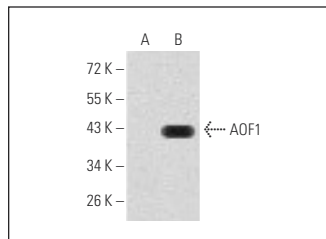
Molecular Weight of AOF1 isoforms: 92/66/19 kDa.

Positive Controls: human AOF1 (6-129)-hlgGfC transfected HEK293 whole cell lysate.

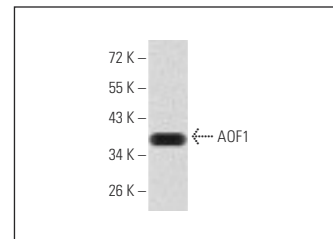
STORAGE

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

DATA



AOF1 (5E10C1): sc-517222. Western blot analysis of AOF1 expression in non-transfected (A) and human AOF1 (6-129)-hlgGfC transfected (B) HEK293 whole cell lysates.



AOF1 (5E10C1): sc-517222. Western blot analysis of AOF1 expression in human AOF1 (6-129) recombinant protein.

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.