AOF1 (V-20): sc-103388

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BIOTECHNOLOGY

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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 tran-scriptional 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

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3. Forneris, F., Battaglioli, E., Mattevi, A. and Binda, C. 2009. New roles of flavoproteins in molecular cell biology: histone demethylase LSD1 and chromatin. FEBS J. 276: 4304-4312.

4. Karytinos, A., Forneris, F., Profumo, A., Ciossani, G., Battaglioli, E., Binda, C. and Mattevi, A. 2009. A novel mammalian flavin-dependent histone demethylase. J. Biol. Chem. 284: 17775-17782.

5. Ciccone, D.N., Su, H., Hevi, S., Gay, F., Lei, H., Bajko, J., Xu, G., Li, E. and Chen, T. 2009. KDM1B is a histone H3K4 demethylase required to estab-lish maternal genomic imprints. Nature 461: 415-418.

6. Online Mendelian Inheritance in Man, OMIM™. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 613081. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: AOF1 (human) mapping to 6p22.3; Aof1 (mouse) mapping to 13 A5.

SOURCE

AOF1 (V-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of AOF1 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-103388 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

AOF1 (V-20) is recommended for detection of AOF1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 AOF1 siRNA (h): sc-95467, AOF1 siRNA (m): sc-105073, AOF1 shRNA Plasmid (h): sc-95467-SH, AOF1 shRNA Plasmid (m): sc-105073-SH, AOF1 shRNA (h) Lentiviral Particles: sc-95467-V and AOF1 shRNA (m) Lentiviral Particles: sc-105073-V.

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

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) Immunofluo-rescence: 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.

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.