

AOF1 (E-6): sc-515565

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

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- 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.
- Karyinos, 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.
- 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 establish maternal genomic imprints. *Nature* 461: 415-418.

CHROMOSOMAL LOCATION

Genetic locus: KDM1B (human) mapping to 6p22.3; Kdm1b (mouse) mapping to 13 A5.

SOURCE

AOF1 (E-6) is a mouse monoclonal antibody raised against amino acids 39-253 mapping near the N-terminus of AOF1 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.

AOF1 (E-6) is available conjugated to agarose (sc-515565 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515565 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515565 PE), fluorescein (sc-515565 FITC), Alexa Fluor[®] 488 (sc-515565 AF488), Alexa Fluor[®] 546 (sc-515565 AF546), Alexa Fluor[®] 594 (sc-515565 AF594) or Alexa Fluor[®] 647 (sc-515565 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-515565 AF680) or Alexa Fluor[®] 790 (sc-515565 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

AOF1 (E-6) is recommended for detection of AOF1 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 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.

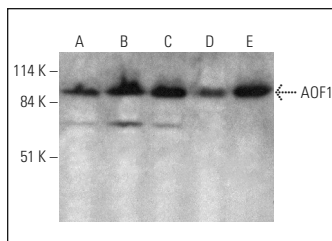
Molecular Weight of AOF1 isoforms: 92/66/19 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, K-562 nuclear extract: sc-2130 or Jurkat nuclear extract: sc-2132.

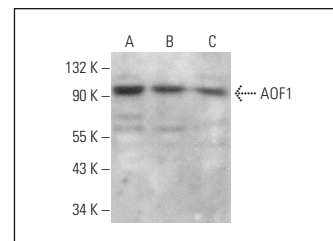
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



AOF1 (E-6): sc-515565. Western blot analysis of AOF1 expression in HeLa (A), K-562 (B), Jurkat (C), NIH/3T3 (D) and IMR-32 (E) nuclear extracts.



AOF1 (E-6): sc-515565. Western blot analysis of AOF1 expression in Neuro-2A (A), EOC 20 (B) and RAW 264.7 (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.

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.