

AOF2 Antibody (internal region)
Peptide-affinity purified goat antibody
Catalog # AF2770a**Specification**

AOF2 Antibody (internal region) - Product Information

Application	WB
Primary Accession	O60341
Other Accession	NP_055828.2 , 23028
Reactivity	Human
Predicted	Mouse, Rat, Pig, Dog, Cow
Host	Goat
Clonality	Polyclonal
Concentration	0.5 mg/ml
Isotype	IgG
Calculated MW	92903

AOF2 Antibody (internal region) - Additional Information**Gene ID** 23028**Other Names**

Lysine-specific histone demethylase 1A, 1.-.-., BRAF35-HDAC complex protein BHC110, Flavin-containing amine oxidase domain-containing protein 2, KDM1A, AOF2, KDM1, KIAA0601, LSD1

Format

0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

AOF2 Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

AOF2 Antibody (internal region) - Protein Information**Name** KDM1A ([HGNC:29079](#))**Function**

Histone demethylase that can demethylate both 'Lys-4' (H3K4me) and 'Lys-9' (H3K9me) of histone H3, thereby acting as a coactivator or a corepressor, depending on the context (PubMed:15620353, PubMed:15811342, PubMed:16140033, PubMed:<a

[16079794](http://www.uniprot.org/citations/16079794), PubMed: [16079795](http://www.uniprot.org/citations/16079795), PubMed: [16223729](http://www.uniprot.org/citations/16223729)). Acts by oxidizing the substrate by FAD to generate the corresponding imine that is subsequently hydrolyzed (PubMed: [15620353](http://www.uniprot.org/citations/15620353) [15811342](http://www.uniprot.org/citations/15811342) [16079794](http://www.uniprot.org/citations/16079794) [21300290](http://www.uniprot.org/citations/21300290)). Acts as a corepressor by mediating demethylation of H3K4me, a specific tag for epigenetic transcriptional activation. Demethylates both mono- (H3K4me1) and di-methylated (H3K4me2) H3K4me (PubMed: [15620353](http://www.uniprot.org/citations/15620353) [20389281](http://www.uniprot.org/citations/20389281) [21300290](http://www.uniprot.org/citations/21300290) [23721412](http://www.uniprot.org/citations/23721412)). May play a role in the repression of neuronal genes. Alone, it is unable to demethylate H3K4me on nucleosomes and requires the presence of RCOR1/CoREST to achieve such activity (PubMed: [16140033](http://www.uniprot.org/citations/16140033) [16079794](http://www.uniprot.org/citations/16079794) [16885027](http://www.uniprot.org/citations/16885027) [21300290](http://www.uniprot.org/citations/21300290) [23721412](http://www.uniprot.org/citations/23721412)). Also acts as a coactivator of androgen receptor (AR)-dependent transcription, by being recruited to AR target genes and mediating demethylation of H3K9me, a specific tag for epigenetic transcriptional repression. The presence of PRKCB in AR-containing complexes, which mediates phosphorylation of 'Thr-6' of histone H3 (H3T6ph), a specific tag that prevents demethylation H3K4me, prevents H3K4me demethylase activity of KDM1A (PubMed: [16079795](http://www.uniprot.org/citations/16079795)). Demethylates di-methylated 'Lys-370' of p53/TP53 which prevents interaction of p53/TP53 with TP53BP1 and represses p53/TP53-mediated transcriptional activation. Demethylates and stabilizes the DNA methylase DNMT1 (PubMed: [29691401](http://www.uniprot.org/citations/29691401)). Demethylates methylated 'Lys-42' and methylated 'Lys-117' of SOX2 (PubMed: [29358331](http://www.uniprot.org/citations/29358331)). Required for gastrulation during embryogenesis. Component of a RCOR/GFI/KDM1A/HDAC complex that suppresses, via histone deacetylase (HDAC) recruitment, a number of genes implicated in multilineage blood cell development. Effector of SNAI1-mediated transcription repression of E-cadherin/CDH1, CDN7 and KRT8. Required for the maintenance of the silenced state of the SNAI1 target genes E-cadherin/CDH1 and CDN7 (PubMed: [20389281](http://www.uniprot.org/citations/20389281)).

Cellular Location

Nucleus

Tissue Location

Ubiquitously expressed.

AOF2 Antibody (internal region) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)

- [Flow Cytometry](#)
- [Cell Culture](#)

AOF2 Antibody (internal region) - Images



AF2770a (0.5 µg/ml) staining of Human Kidney lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

AOF2 Antibody (internal region) - References

DNA oxidation as triggered by H3K9me2 demethylation drives estrogen-induced gene expression
Perillo B, Ombra MN, Bertoni A, Cuozzo C, Sacchetti S, Sasso A, Chiariotti L, Malorni A, Abbondanza C, Avvedimento EV Science. 2008 Jan 11;319(5860):202-6 PMID: 18187655