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KDM1B Antibody

Catalog # ASC11718

Product Information

Application	WB, E
Primary Accession	Q8NB78
Other Accession	NP_694587, 116256451
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	92098
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	KDM1B antibody can be used for detection of KDM1B by Western blot at 1 - 2 g/ml.

Additional Information

Gene ID	221656
Other Names	Lysine-specific histone demethylase 1B, 1.-.-.-, Flavin-containing amine oxidase domain-containing protein 1, Lysine-specific histone demethylase 2, KDM1B, AOF1, C6orf193, LSD2
Target/Specificity	KDM1B; KDM1B antibody is human, mouse and rat reactive. At least two isoforms of KDM1B are known to exist; this KDM1B antibody will detect both isoforms.
Reconstitution & Storage	KDM1B antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	KDM1B Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	KDM1B (HGNC:21577)
Function	Histone demethylase that demethylates 'Lys-4' of histone H3, a specific tag for epigenetic transcriptional activation, thereby acting as a corepressor. Required for de novo DNA methylation of a subset of imprinted genes during oogenesis. Acts by oxidizing the substrate by FAD to generate the corresponding imine that is subsequently hydrolyzed. Demethylates both mono- and di-methylated 'Lys-4' of histone H3. Has no effect on tri-methylated 'Lys-4', mono-, di- or tri-methylated 'Lys-9', mono-, di- or tri-methylated 'Lys-27', mono-, di- or tri-methylated 'Lys-36' of histone H3, or on mono-, di- or tri-methylated 'Lys-20' of histone H4. Alone, it is unable to

	demethylate H3K4me on nucleosomes and requires the presence of GLYR1 to achieve such activity, they form a multifunctional enzyme complex that modifies transcribed chromatin and facilitates Pol II transcription through nucleosomes (PubMed:30970244).
Cellular Location	Nucleus. Chromosome. Note=Found in actively RNAPolII- transcribed gene bodies.

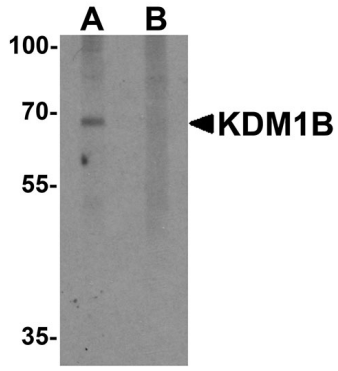
Background

Flavin-dependent histone demethylases regulate histone lysine methylation, an epigenetic mark that regulates gene expression and chromatin function (reviewed in 1). KDM1B is a recently identified histone H3K4 demethylase that is required to establish maternal genomic imprints; targeted disruption of the KDM1B gene in mice led to lethality in their embryos, suggesting demethylation of H3K4 is critical for establishing the DNA methylation imprints (2). KDM1B has also been shown to play a role in the transcription elongation in several genes (3).

References

Culhane JC and Cole PA. LSD1 and the chemistry of histone demethylation. Curr. Opin. Chem. Biol. 2007; 11:561-8.
Ciccone DN, Su H, Hevi S, et al. KDM1B is a histone H3K4 demethylase required to establish maternal genomic imprints. Nature 2009; 461:415-8.
Fang R, Barbera A, Xu Y, et al. Human LSD2/KDM1b/AOF1 regulates genes transcription by modulating intragenic H3K4me2 methylation. Mol. Cell 2010; 39:222-233.

Images



Western blot analysis of KDM1B in 3T3 cell lysate with KDM1B antibody at 2 µg/ml in (A) the absence and (B) the presence of blocking peptide.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.