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KDM1B Antibody
Catalog # ASC11718

Specification

KDM1B Antibody - Product Information

Application	**WB**
Primary Accession	Q8NB78
Other Accession	NP_694587, 116256451
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 65 kDa** **Observed: 68 kDa KDa**
Application Notes	**KDM1B antibody can be used for detection of KDM1B by Western blot at 1 - 2 µg/ml.**

KDM1B Antibody - Additional Information

Gene ID **221656**

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.

KDM1B Antibody - 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).

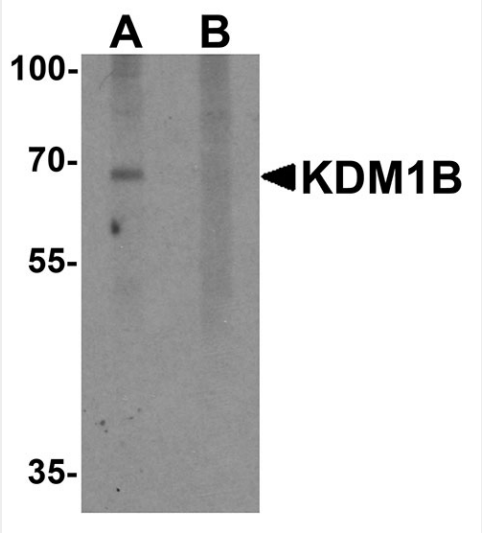
Cellular Location
Nucleus. Chromosome. Note=Found in actively RNAPolII- transcribed gene bodies.

KDM1B Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KDM1B Antibody - 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.

KDM1B Antibody - 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).

KDM1B Antibody - 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.