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M JMJD3 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1022b

Product Information

Application	WB, IHC-P, E
Primary Accession	Q5NCY0
Other Accession	O15054
Reactivity	Human, Mouse
Predicted	Human, Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	176355
Antigen Region	1606-1641

Additional Information

Gene ID	216850
Other Names	Lysine-specific demethylase 6B, 11411-, JmjC domain-containing protein 3, Jumonji domain-containing protein 3, Kdm6b, Jmjd3, Kiaa0346
Target/Specificity	This Mouse JMJD3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1606-1641 amino acids from the C-terminal region of mouse JMJD3.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	M JMJD3 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Kdm6b
Synonyms	Jmjd3, Kiaa0346
Function	Histone demethylase that specifically demethylates 'Lys-27' of histone H3,

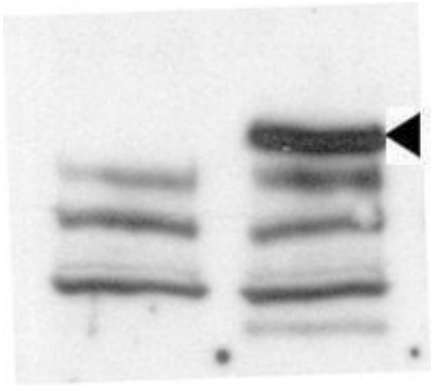
thereby playing a central role in histone code. Demethylates trimethylated and dimethylated H3 'Lys-27'. Plays a central role in regulation of posterior development, by regulating HOX gene expression. Involved in inflammatory response by participating in macrophage differentiation in case of inflammation by regulating gene expression and macrophage differentiation (PubMed:17825402). Plays a demethylase-independent role in chromatin remodeling to regulate T-box family member-dependent gene expression by acting as a link between T- box factors and the SMARCA4-containing SWI/SNF remodeling complex (PubMed:21095589).

Cellular Location Nucleus.

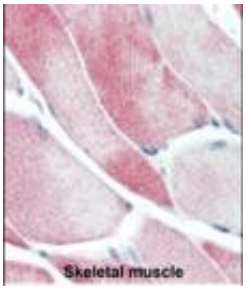
Background

Covalent modification of histones plays critical role in regulating chromatin structure and transcription. While most covalent histone modifications are reversible, only recently has it been established that methyl groups are subject to enzymatic removal from histones. A family of novel JmjC domain-containing histone demethylation (JHDM) enzymes have been identified that perform this specific function. Histone demethylation by JHDM proteins requires cofactors Fe(II) and alpha-ketoglutarate. Family members include JHDM1 (demethylating histone 3 at lysine 36), and JHDM2A as well as JMJD2CH3K9 (both of which demethylate histone 3 at lysine 9). Contributions of histone demethylase activity to tumor development, decreases in cell proliferation, and hormone-dependent transcriptional activation have been observed.

Images



Western blot analysis of anti-JMJD3 C-term Pab (Cat. #AP1022b) in untransfected 293 cells (left) and transfected 293 cells (right). The detection of a prominent band at 180kDa is observed on transfected 293 cells but not on the untransfected 293 cells. Data kindly provided by Dr.Gioacchino Natoli of European Institute of Oncology.



Formalin-fixed and paraffin-embedded human Skeletal Muscle tissue reacted with JMJD3 Antibody(C-term)(Cat.#AP1022b), which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Citations

- KDM6B interacts with TFDP1 to activate P53 signaling in regulating mouse palatogenesis
- Human papillomavirus E7 oncoprotein induces KDM6A and KDM6B histone demethylase expression and causes epigenetic reprogramming.
- Opposing roles of STAT4 and Dnmt3a in Th1 gene regulation.
- Jmjd3 mediates blood-spinal cord barrier disruption after spinal cord injury by regulating MMP-3 and MMP-9 expressions.
- p53 interaction with JMJD3 results in its nuclear distribution during mouse neural stem cell differentiation.

- The role of NF-kappaB and H3K27me3 demethylase, Jmjd3, on the anthrax lethal toxin tolerance of RAW 264.7 cells.
- Gene networking and inflammatory pathway analysis in a JMJD3 knockdown human monocytic cell line.

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