10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

JMJD3 Antibody

Catalog # ASC11429

Product Information

Application	WB, IF, ICC, E
Primary Accession	O15054
Other Accession	EAW90126, 122937251
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	176632
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	JMJD3 antibody can be used for detection of EPAC1 by Western blot at 0.5 g/mL. Antibody can also be used for immunocytochemistry starting at 2.5 g/mL. For immunofluorescence start at 5 g/mL.

Additional Information

Gene ID	23135
Other Names	Lysine-specific demethylase 6B, 1.14.11.-, JmjC domain-containing protein 3, Jumonji domain-containing protein 3, Lysine demethylase 6B, KDM6B, JMJD3, KIAA0346
Target/Specificity	KDM6B; This antibody is specific for JMJD3 and will not recognize other JMJD proteins.
Reconstitution & Storage	JMJD3 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	JMJD3 Antibody 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 (PubMed:17713478, PubMed:17825402, PubMed:17851529, PubMed:18003914). Demethylates trimethylated and dimethylated H3 'Lys-27' (PubMed:17713478, PubMed:17825402, PubMed:17851529, PubMed:18003914). Plays a central

role in regulation of posterior development, by regulating HOX gene expression (PubMed:17851529). 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 (By similarity).

Cellular Location Nucleus.

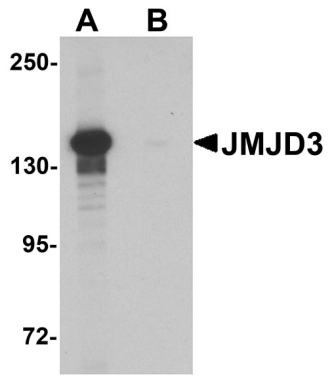
Background

JMJD3 Antibody: The Jumonji domain-containing protein 3 (JMJD3) functions as a trimethylation-specific demethylase, converting the trimethylated histone H3 Lys27 residue to the dimethylated form, and is thought to also function as a transcriptional repressor. JMJD3 plays a central role in regulation of posterior development, by regulating HOX gene expression. It is involved in inflammatory response by participating in macrophage differentiation in case of inflammation by regulating gene expression and macrophage differentiation. JMJD3 can also interact with and demethylate p53, resulting in its stabilization and localization to the nucleus in mouse embryo fibroblasts during neural stem cell differentiation.

References

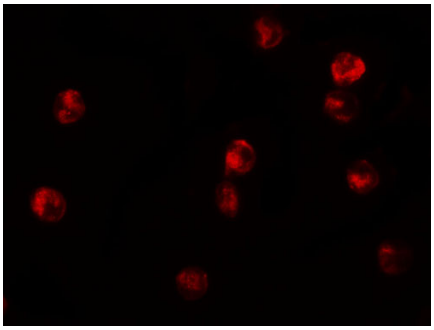
Agger K, Cloos PA, Christensen J, et al. UTX and JMJD3 are histone H3K27 demethylases involved in HOX gene regulation and development. Nature 2007; 449:731-4.
De Santa F, Totaro MG, Prosperini E, et al. The histone H3 lysine-27 demethylase Jmjd3 links inflammation to inhibition of polycomb-mediated silencing. Cell 2007; 130:1083-94
Sola S, Xavier JM, Santos DM, et al. p53 interaction with JMJD3 results in its nuclear distribution during mouse neural stem cell differentiation. PLoS One 2011; 6:e18421.

Images



Western blot analysis of JMJD3 in K562 cell lysate with JMJD3 antibody at 0.5 µg/mL in (A) the absence and (B) the presence of blocking peptide.

Immunocytochemistry of JMJD3 in K562 cells with JMJD3 antibody at 2.5 µg/mL.



Immunofluorescence of JMJD3 in K562 cells with JMJD3 antibody at 20 µg/mL.