

BACKGROUND

The *Jumonji* (*Jmj*) gene was identified by a mouse gene trap approach and has essential roles in the development of multiple tissues. The *Jmj* protein has a DNA binding domain, ARID, and two conserved *Jmj* domains (*JmjN* and *JmjC*).

Several proteins in the *Jumonji* family are involved in transcriptional repression and/or chromatin regulation.¹ Recently human members of the family have been shown to be histone demethylases, and the *JmjC* domain is essential for demethylase activity.²

Jumonji domain containing 1B (*JMJD1B*, also known as *KDM3B/JHDM2B*) contains a highly-conserved C-terminus, which includes a zinc finger with the unique spacing Cys-X2-Cys-X7-His-X2-Cys-X2-Cys-X4-Cys-X2-Cys and a *JmjC* domain. *JMJD1B* has been shown to be a histone demethylase responsible for demethylating mono methyl histone H3 at K9.³ Methylation of H3-K4 and H3-K9 is linked to transcriptional activation and repression, respectively. *JMJD1B* plays an important role in chromatin regulation and gene expression, and controls development through various signaling pathways. It may also be a candidate for tumor suppressors.

References:

1. Jung J et al.: *Dev Dyn.* 232:21-32, 2005.
2. Shin S & Janknecht R: *Biochem Biophys Res Commun.* 353:973-7, 2007.
3. Natoli G et al.: *Curr. Opin. Drug Dis. Dev.* 12:607-615, 2009.

TECHNICAL INFORMATION

Source:

JMJD1B Antibody is a mouse monoclonal antibody raised against human *JMJD1B* carboxyl-terminal sequence.

Specificity and Sensitivity:

This monoclonal antibody detects endogenous levels of *JMJD1B* protein in normal primary cell lysates.

Storage Buffer: PBS and 30% glycerol

Storage:

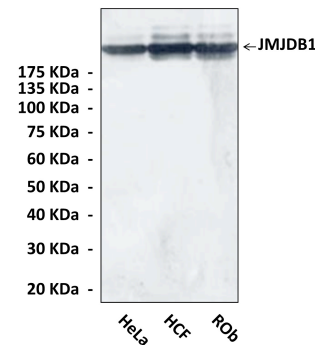
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

APPLICATIONS

Application:	*Dilution:
WB	1:1000
IP	1:50
IHC	1:100
ICC	n/d
FACS	n/d

*Optimal dilutions must be determined by end user.

QUALITY CONTROL DATA



Western Blot detection of endogenous *JMJD1B* protein in normal primary cell lysates using *JMJD1B* antibody. HCF: Human Cardiac Fibroblasts. ROB: Rat Osteoblasts.

