

JMJD6 monoclonal antibody

Catalog: MB66474

Host: Mouse

Reactivity: Human

Background:

Jumonji domain-containing protein 6 (JMJD6) is a bi-functional metalloenzyme belonging to the large family of JmjC domain-containing proteins. These proteins are ferrous iron- and 2-oxoglutarate-dependent enzymes (Fe²⁺/2OG) that catalyze hydroxylation and demethylation reactions on a wide variety of protein and nucleic acid substrates. JMJD6 is thought to act as both a lysyl-hydroxylase and an arginine demethylase, although the latter activity remains controversial. Specifically, JMJD6 has been shown to catalyze 5-hydroxylation of Lys15 and Lys276 residues on the protein U2AF2 / U2AF65 in vivo, affecting pre-mRNA splicing activity. It has also been reported that JMJD6 hydroxylates the Lys382 residue of p53, preventing acetylation and promoting association of p53 with MDMX, resulting in inhibition of p53 transcriptional activity. In addition to hydroxylase activity, JMJD6 also acts as an arginine demethylase by targeting histone H3 at Arg2 (H3R2me) and histone H4 at Arg3 (H4R3me). Unlike other members of the JmjC family, JMJD6 appears to have no lysine demethylase activity. Studies have shown that JMJD6 colocalizes with BRD4 at a subset of enhancers to demethylate H3R2me2 repressor marks. It has also been reported to demethylate non-histone substrates, such as estrogen receptor (ER α), heat shock protein 70 (HSP70), RNA helicase A, and the TRAF6 E3 ubiquitin ligase following activation of toll-like receptors.

Product:

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3.

Molecular Weight:

~ 60 kDa

Swiss-Prot:

Q6NYC1

Purification&Purity:

The antibody was purified by immunogen affinity chromatography.

Applications:

WB (1/500 - 1/1000), IF/ICC (1/50 - 1/100)

Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

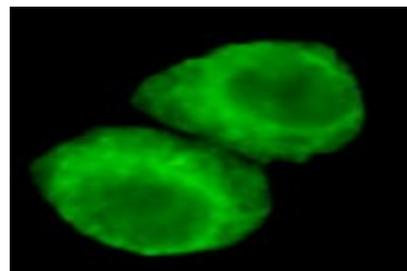
Specificity:

Recognizes endogenous levels of JMJD6 protein.

DATA:



Western blot analysis of JMJD6 expression in HeLa (A), HL60 (B) whole cell lysates.



Immunofluorescent analysis of JMJD6 staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark.

Note:

For research use only, not for use in diagnostic procedure.

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