KDM4A Rabbit monoclonal antibody

Catalog: MB66470 Host: Rabbit Reactivity: Human

BackGround:

The methylation state of lysine residues in histone proteins is a major determinant of the formation of active and inactive regions of the genome and is crucial for proper programming of the genome during development. Jumonji C (JmjC) domain-containing proteins represent the largest class of potential histone demethylase proteins. The JmjC domain can catalyze the demethylation of mono-, di-, and tri-methyl lysine residues via an oxidative reaction that requires iron and α-ketoglutarate. Based on homology, both humans and mice contain at least 30 such proteins, which can be divided into 7 separate families. The jumonji domain-containing protein 2 (JMJD2) family, also known as the JmjC domain-containing histone demethylation protein 3 (JHDM3) family, contains four members: JMJD2A/JHDM3A, JMJD2B/JHDM3B, JMJD2C/JHDM3C, and JMJD2D/JHDM3D. In addition to the JmjC domain, these proteins also contain JmjN, PHD, and tudor domains, the latter of which has been shown to bind to methylated histone H3 at Lys4 and Lys9, and methylated histone H4 at Lys20. JMJD2 proteins have been shown to demethylate di- and tri-methyl histone H3 at Lys9 and Lys36 and function as both activators and repressors of transcription. JMJD2A, JMJD2C, and JMJD2D function as coactivators of the androgen receptor in prostate tumor cells. In contrast, JMJD2A also associates with Rb and NCoR corepressor complexes and is necessary for transcriptional repression of target genes . JMJD2B antagonizes histone H3 Lys9 tri-methylation at pericentric heterochromatin. JMJD2C, also known as GASC1, is amplified in squamous cell carcinomas and metastatic lung carcinoma and inhibition of JMJD2C expression decreases cell proliferation . JMJD2C has also been identified as a downstream target of Oct-4 and is critical for the regulation of self-renewal in embryonic stem cells.

Product:

Liquid in 50mM Tris-Glycine (pH 7.4), 0.15M NaCl, 50% Glycerol, 0.01% Sodium azide and 0.05% BSA.

Molecular Weight:

~ 150 kDa

Swiss-Prot:

O75164

Purification&Purity:

The antibody was purified by immunogen affinity chromatography.

Applications:

WB (1/500 - 1/1000), IP (1/10 - 1/50)

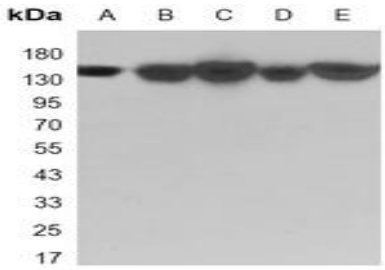
Storage&Stability:

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

Specificity:

Recognizes endogenous levels of KDM4A protein.

DATA:



Western blot analysis of KDM4A expression in Hela (A), A549 (B), HL60 (C), U2OS (D), U87MG (E) whole cell lysates.

Note:

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

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