#M24014

JMJD3(3N7) Mouse mAb

☐ 100 µl (50 Western mini-blots)

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BACKGROUND

JMJD3 (jumonji domain containing 3), also known as KDM6B (lysine demethylase 6B), is a 1,679 amino acid nuclear protein that contains one JMJC domain and belongs to the highly conserved JMJC domain-containing protein family. Functioning as a histone demethylase, JMJD3 uses iron and ascorbate as cofactors to demethylate dimethylated and trimethylated Lys 27 residues of Histone H3, thereby playing an important role in the modification of the histone code. Additionally, JMJD3 regulates posterior development and is involved in the inflammatory response, specifically by mediating macrophage differentiation. JMJD3 is also thought to control the expression of neurogenesis related proteins and, via this regulatory mechanism, may be necessary for neural commitment during early development. Two isoforms of JMJD3 exist due to alternative splicing events.

REFERENCES

1. Hong, S., et al. 2007. Identification of JMJC domain-containing UTX and JMJD3 as Histone H3 Lysine 27 demethylases. Proc. Natl. Acad. Sci. USA104: 18439-18444.
2. Sen, G.L., et al. 2008. Control of differentiation in a self-renewing mammalian tissue by the histone demethylase JMJD3. Genes Dev. 22:1865-1870.
3. Li, Y., et al. 2008. Role of the Histone H3 Lysine 4 methyltransferase, SET7/9,in the regulation of NFκB dependent inflammatory genes: Relevance to diabetes and inflammation. J. Biol. Chem. 283: 26771-26781.

SOURCE

This Abmart monoclonal antibody is produced by immunizing mice with a protein fragment 294aa-883aa of human JMJD3.

SPECIFICITY

JMJD3 monoclonal antibody detects endogenous levels of JMJD3 protein.

STORAGE

Store at -20°C. Stable for one year from the date of shipment.

ALIASES

KDM6B

REACTIVITY

H, (Cross-reactivity in other species is undetermined.)

ISOTYPE

Mouse IgG

PREDICTED MOLECULAR WEIGHT

181KDa

IMPORTANT

Use an **anti-MOUSE** secondary antibody to detect the 10E2 antibody.

SECONDARY ANTIBODY

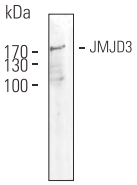
Use an anti-MOUSE secondary antibody.

APPLICATION TESTED

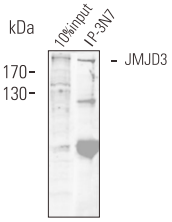
Western blotting	1: 500-1: 1000
Immunoprecipitation	1: 50-1: 100
Immunofluorescence	1: 50-1: 100

*** For Western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 1× TBS, 0.05% Tween-20 at 4°C with gentle shaking, overnight.**

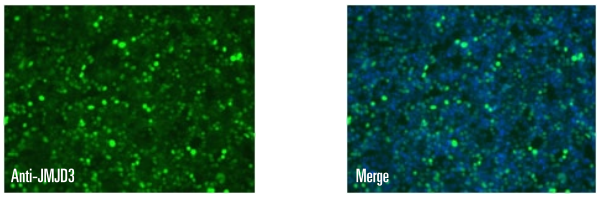
APPLICATION DATA



Western blot analysis of JMJD3 expression in Hela nucleus cell lysate



Immunoprecipitation of JMJD3 expression in transfected whole 293T cell lysates and Western blot analysis using anti-myc antibody



Immunofluorescence staining of methanol-fixed, JMJD3 tranfected Hela cells

COMPANION PRODUCTS

#M20002 Myc-Tag (19C2) Mouse mAb
#M20003 HA-Tag (26D11) Mouse mAb
#M20004 GFP-Tag (7G9) Mouse mAb
#M20007 GST-Tag (12G8) Mouse mAb
#M20008 DYDDDDDK-Tag (3B9) Mouse mAb (Binds to same epitope as Sigma's Anti-FLAG® M2 Antibody)
#M20012 Anti-Myc-Tag Mouse mAb (Agarose Conjugated)
#M20013 Anti-HA-Tag Mouse mAb (Agarose Conjugated)
#M20018 Anti-DYKDDDDK-Tag Mouse mAb (Agarose Conjugated) (Binds to same epitope as Sigma's Anti-FLAG® M2 Antibody)