

Product Datasheet

Lysine (K)-specific Demethylase 4A/KDM4A/JMJD2A Antibody NB110-40585

Unit Size: 0.1 ml

Store at 4C. Do not freeze.

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NB110-40585**Lysine (K)-specific Demethylase 4A/KDM4A/JMJD2A Antibody****Product Information**

Unit Size	0.1 ml
Concentration	0.2 mg/ml
Storage	Store at 4C. Do not freeze.
Clonality	Polyclonal
Preservative	0.09% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	TBS and 0.1% BSA

Product Description

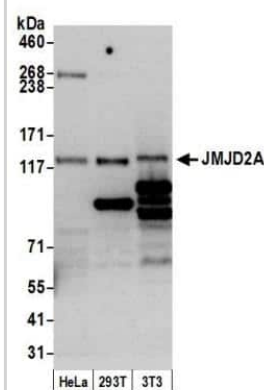
Host	Rabbit
Gene ID	9682
Gene Symbol	KDM4A
Species	Human, Mouse
Immunogen	The immunogen recognized by this antibody maps to a region between residue 1010 and the C-terminus (residue 1064) of human Jumonji Domain Containing 2A using the numbering given in entry NP_055478.1 (GeneID 9682).

Product Application Details

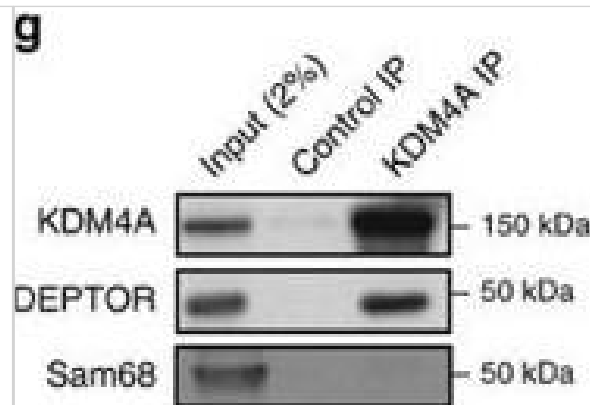
Applications	Western Blot, Immunocytochemistry/ Immunofluorescence, Immunoprecipitation
Recommended Dilutions	Western Blot 1:2000-1:10000, Immunocytochemistry/ Immunofluorescence 1:10-1:500, Immunoprecipitation 2-5 ug/mg lysate
Application Notes	Use in ICC/IF reported in scientific literature (PMID 22373579), Use in ICC/IF reported in scientific literature (25645366).

Images

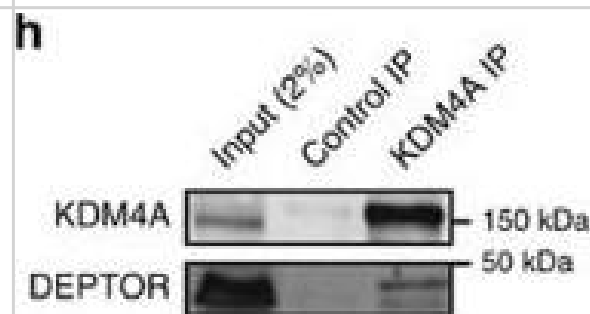
Western Blot: Lysine (K)-specific Demethylase 4A/KDM4A/JMJD2A Antibody [NB110-40585] - Nuclear extract (50 ug) from HeLa, HEK293T, and mouse NIH 3T3 cells prepared using NETN lysis buffer. Antibody: Affinity purified rabbit anti-JMJD2A antibody used for WB at 0.1 ug/ml. Detection: Chemiluminescence with an exposure time of 3 minutes.



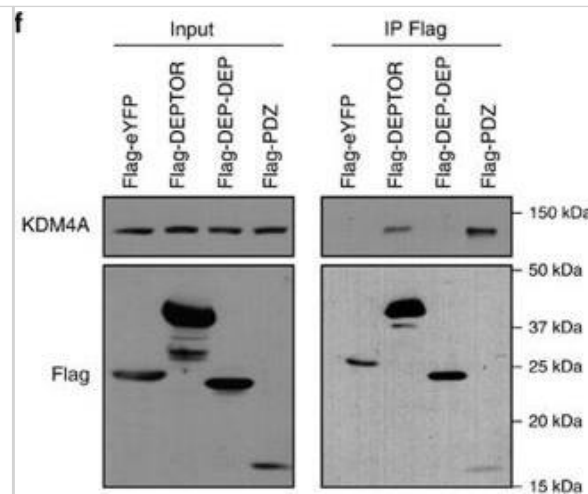
Western Blot: Lysine (K)-specific Demethylase 4A/KDM4A/JMJD2A Antibody [NB110-40585] - KDM4A interacts with the mTORC1/2 complex. (a) Relative mRNA levels of negative & positive regulators of the PTEN/AKT/mTOR pathway following KDM4A depletion. Quantifications of mRNAs by RT-qPCR were normalized against β -actin (ActB) mRNA. Asterisks denote a statistical difference between siKDM4A-treated cells & siGFP control cells, two-sided t-test $P < 0.05$ (graph represents two independent experiences). Error bars represent standard deviation. (b) Co-immunoprecipitation of endogenous mTORC1/2 complex members with Flag-KDM4A in 293T transfected cells. (c) Comparison of mTORC1/2-associated proteins with Flag-tagged mTOR or KDM4A. The 293T cells were transfected with either Flag-eYFP, Flag-KDM4A or Flag-mTOR, & protein lysates were subjected to anti-Flag immunoprecipitation. (d) Co-immunoprecipitation of Flag-KDM4A & HA-DEPTOR in 293T cells. (e) Endogenous KDM4A co-immunoprecipitates with Flag-DEPTOR. (f) DEPTOR PDZ domain associates with endogenous KDM4A. Flag immunoprecipitation of flag-tagged full length or fragments of DEPTOR. The samples were not sonicated in this experiment to confirm that the interaction is independent of nucleus disruption. (g) Endogenous KDM4A & DEPTOR associate in 293E cells. (h) Endogenous KDM4A & DEPTOR co-immunoprecipitate in NHA-hTERT cells. Image collected & cropped by CiteAb from the following publication (<https://www.nature.com/articles/ncomms12700>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



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Publications

- Xu M, Moresco JJ, Chang M et al. SHMT2 and the BRCC36/BRISC deubiquitinase regulate HIV-1 Tat K63-ubiquitylation and destruction by autophagy PLoS Pathog. 2018-05-23 [PMID: 29791506] (WB, Human)
- Qiu MT, Fan Q, Zhu Z et al. KDM4B and KDM4A promote endometrial cancer progression by regulating androgen receptor, c-myc, and p27kip1. Oncotarget 2015-10-13 [PMID: 26397136] (WB)
- Carbonneau M, M Gagne L, Lalonde ME et al. The oncometabolite 2-hydroxyglutarate activates the mTOR signalling pathway. Nat Commun 2016-09-14 [PMID: 27624942] (WB, Human)
- Gibbs-Seymour I, Markiewicz E, Bekker-Jensen S et al. Lamin A/C-dependent interaction with 53BP1 promotes cellular responses to DNA damage Aging Cell. 2015-01-23 [PMID: 25645366] (IP, Human)
- Das A, Chai JC, Jung KH et al. JMJD2A attenuation affects cell cycle and tumourigenic inflammatory gene regulation in lipopolysaccharide stimulated neuroectodermal stem cells. Exp Cell Res. 2014-09-01 [PMID: 25193078]
- Luo W, Chang R, Zhong J, Pandey A, Semenza GL. Histone demethylase JMJD2C is a coactivator for hypoxia-inducible factor 1 that is required for breast cancer progression. Proc Natl Acad Sci U S A. 2012-12-04 [PMID: 23129632]
- Mallette FA, Mattioli F, Cui G et al. RNF8- and RNF168-dependent degradation of KDM4A/JMJD2A triggers 53BP1 recruitment to DNA damage sites EMBO J. 2012-04-01 [PMID: 22373579] (ICC/IF, WB, Human)
- Kim TD, Shin S, Berry WL et al. The JMJD2A demethylase regulates apoptosis and proliferation in colon cancer cells. J Cell Biochem 2012-04-01 [PMID: 22134899]
- Tan MK, Lim HJ, Harper JW et al. SCF(FBXO22) regulates histone H3 lysine 9 and 36 methylation levels by targeting histone demethylase KDM4A for ubiquitin-mediated proteasomal degradation. Mol Cell Biol 2011-09-01 [PMID: 21768309]
- Li Q, Ke Q, Costa M et al. Alterations of histone modifications by cobalt compounds. Carcinogenesis 2009-07-01 [PMID: 19376846]
- Shin S, Janknecht R. Activation of androgen receptor by histone demethylases JMJD2A and JMJD2D. Biochem Biophys Res Commun 2007-08-01 [PMID: 17555712]
- Mallette FA, Richard S. JMJD2A Promotes Cellular Transformation by Blocking Cellular Senescence through Transcriptional Repression of the Tumor Suppressor CHD5 Cell Rep 2012-11-29 [PMID: 23168260] (WB, Human)





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NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

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