SANTA CRUZ BIOTECHNOLOGY, INC.

# JHDM1D (N-13): sc-135489

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*The Power to Question*

## BACKGROUND

JHDM1D (jumonji C domain containing histone demethylase 1 homolog D) is a 941 amino acid protein belonging to the JHDM1 histone demethylase family. Existing as two alternatively spliced isoforms, JHDM1D contains one JmjC domain and a PHD-type zinc finger. The gene encoding JHDM1D maps to human chromosome 7, which houses over 1,000 genes and comprises nearly 5% of the human genome. Defects in some of the genes localized to chromosome 7 have been linked to osteogenesis imperfecta, Pendred syndrome, Lissencephaly, Citrullinemia and Shwachman-Diamond syndrome. The deletion of a portion of the q arm of chromosome 7 is associated with Williams-Beuren syndrome, a condition characterized by mild mental retardation, an unusual comfort and friendliness with strangers and an elfin appearance. Deletions of portions of the q arm of chromosome 7 are also seen in a number of myeloid disorders including cases of acute myelogenous leukemia and myelodysplasia.

## REFERENCES


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2. Liang, H., Fairman, J., Claxton, D.F., Nowell, P.C., Green, E.D. and Nagarajan, L. 1998. Molecular anatomy of chromosome 7q deletions in myeloid neoplasms: evidence for multiple critical loci. Proc. Natl. Acad. Sci. USA 95: 3781-3785.
3. Iwasaki, S., Usami, S., Abe, S., Isoda, H., Watanabe, T. and Hoshino, T. 2001. Long-term audiological feature in Pendred syndrome caused by PDS mutation. Arch. Otolaryngol. Head Neck Surg. 127: 705-708.
4. Eckert, M.A., Galaburda, A.M., Mills, D.L., Bellugi, U., Korenberg, J.R. and Reiss, A.L. 2006. The neurobiology of Williams syndrome: cascading influences of visual system impairment? Cell. Mol. Life Sci. 63: 1867-1875.


## CHROMOSOMAL LOCATION

Genetic locus: JHDM1D (human) mapping to 7q34; Jhdm1d (mouse) mapping to 6 B1.

## SOURCE

JHDM1D (N-13) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of JHDM1D of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-135489 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

JHDM1D (N-13) is recommended for detection of JHDM1D isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other JHDM1 family members.

JHDM1D (N-13) is also recommended for detection of JHDM1D isoforms 1 and 2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for JHDM1D siRNA (h): sc-89819, JHDM1D siRNA (m): sc-146320, JHDM1D shRNA Plasmid (h): sc-89819-SH, JHDM1D shRNA Plasmid (m): sc-146320-SH, JHDM1D shRNA (h) Lentiviral Particles: sc-89819-V and JHDM1D shRNA (m) Lentiviral Particles: sc-146320-V.

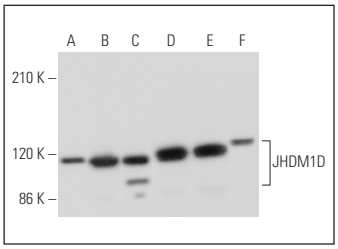
Molecular Weight of JHDM1D: 107 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, NIH/3T3 whole cell lysate: sc-2210 or MCF7 whole cell lysate: sc-2206.

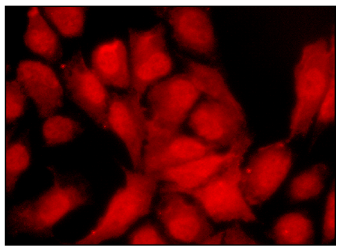
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA




JHDM1D (N-13): sc-135489. Western blot analysis of JHDM1D expression in Hep G2 (**A**), MCF7 (**B**), A-431 (**C**), Jurkat (**D**) and NIH/3T3 (**E**) whole cell lysates and mouse embryonic liver tissue extract (**F**).



JHDM1D (N-13): sc-135489. Immunofluorescence staining of formalin-fixed HeLa cells showing nuclear and cytoplasmic localization. Kindly provided by Yang Xiang, Ph.D., Division of Newborn Medicine, Boston Children's Hospital, Cell Biology Department, Harvard Medical School.

## RESEARCH USE

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