

MAML2 (H-240): sc-68907

BACKGROUND

MAML2 (mastermind-like protein 2), also known as MAM2, MAM3 or MLL-MAML2, is a nuclear speckle protein that acts as a transcriptional co-activator for Notch receptors. The Notch signaling pathway influences cell fate by regulating the ability of precursor cells to properly respond to developmental signals. MAML2 is a member of the mastermind-like family of proteins that are human homologs of the *Drosophila melanogaster* mastermind protein. Through its N-terminal region, MAML2 interacts with the ankyrin repeats of the Notch proteins Notch 1, Notch 2, Notch 3 and Notch 4. This interaction leads to formation of a DNA-binding complex with the Notch proteins and RBP-J κ ; a complex that can then induce HES1 gene expression. While the N-terminal domain of MAML2 is essential for proper Notch binding, the C-terminal domain of MAML2 is essential for transcriptional activation. A chromosomal aberration involving the gene encoding MAML2 is implicated in mucoepidermoid carcinomas, clear cell hidradenomas and benign Warthin tumors.

REFERENCES

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2. Lin, S.E., et al. 2002. Identification of new human mastermind proteins defines a family that consists of positive regulators for Notch signaling. *J. Biol. Chem.* 277: 50612-50620.
3. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607537. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Wu, L., et al. 2004. Modulation of Notch signaling by mastermind-like (MAML) transcriptional co-activators and their involvement in tumorigenesis. *Semin. Cancer Biol.* 14: 348-356.
5. Katoh, M., et al. 2006. WNT antagonist, DKK2, is a Notch signaling target in intestinal stem cells: augmentation of a negative regulation system for canonical WNT signaling pathway by the Notch-DKK2 signaling loop in primates. *Int. J. Mol. Med.* 19: 197-201.
6. William, D.A., et al. 2007. Identification of oscillatory genes in somitogenesis from functional genomic analysis of a human mesenchymal stem cell model. *Dev. Biol.* 305: 172-186.
7. Wu, L., et al. 2007. The transcriptional co-activator Mam1 is required for Notch2-mediated marginal zone B cell development. *Blood* 110: 3618-3623.
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CHROMOSOMAL LOCATION

Genetic locus: MAML2 (human) mapping to 11q21; Mam12 (mouse) mapping to 9 A1.

SOURCE

MAML2 (H-240) is a rabbit polyclonal antibody raised against amino acids 171-410 mapping near the N-terminus of MAML2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

MAML2 (H-240) is recommended for detection of MAML2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MAML2 (H-240) is also recommended for detection of MAML2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for MAML2 siRNA (h): sc-75742, MAML2 siRNA (m): sc-75743, MAML2 shRNA Plasmid (h): sc-75742-SH, MAML2 shRNA Plasmid (m): sc-75743-SH, MAML2 shRNA (h) Lentiviral Particles: sc-75742-V and MAML2 shRNA (m) Lentiviral Particles: sc-75743-V.

Molecular Weight of MAML2: 125 kDa.

Positive Controls: 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.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.