

MAML2 (N-15): sc-82217

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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4. Wu, L. and Griffin, J.D. 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. and Katoh, M. 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 Maml1 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; Maml2 (mouse) mapping to 9 A1.

RESEARCH USE

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

SOURCE

MAML2 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-82217 X, 200 μ g/0.1 ml.

Blocking peptide available for competition studies, sc-82217 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MAML2 (N-15) 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), 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); non cross-reactive with family member MAML3.

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.

MAML2 (N-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

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 donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (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.



Try **MAML2 (G-07): sc-100778**, our highly recommended monoclonal alternative to MAML2 (N-15).