SANTA CRUZ BIOTECHNOLOGY, INC.

Mam1 (N-20): sc-18506

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Notch receptors are involved in cell-fate determination in organisms as diverse as flies, frogs, and humans. The mastermind gene has been identified in multiple genetic screens for modifiers of Notch mutations in *Drosophila melanogaster*. In *Drosophila*, loss-of-function mutations of Notch produce a neurogenic phenotype in which cells destined to become epidermis switch fate and differentiate to neural cells. The human homolog, mastermind-like 1 (Mam1), localizes to nuclear bodies. Mam1 binds to the ankyrin repeat domain of all four mammalian Notch receptors, forms a DNA-binding complex with ICN and RBP-Jk, and amplifies Notch-induced transcription of Hes1. Mam1 is an essential component of the transcriptional apparatus of Notch signaling. The gene which encodes Mam1 maps to human chromosome 5.

REFERENCES

1. Nagase, T., et al. 1996. Prediction of the coding sequences of unidentified human genes. V. The coding sequences of 40 new genes (KIAA0161-KIAA0200) deduced by analysis of cDNA clones from human cell line KG-1. DNA Res. 3: 17-24.
2. Wu, L., et al. 2000. MAML1, a human homologue of *Drosophila* mastermind, is a transcriptional co-activator for Notch receptors. Nat. Genet. 26: 484-489.
3. Chai, Y., et al. 2001. The role of protein composition in specifying nuclear inclusion formation in polyglutamine disease. J. Biol. Chem. 276: 44889-44897.
4. Kitagawa, M., et al. 2001. A human protein with sequence similarity to *Drosophila* mastermind coordinates the nuclear form of notch and a CSL protein to build a transcriptional activator complex on target promoters. Mol. Cell. Biol. 21: 4337-4346.
5. LocusLink Report (LocusID: 605424). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: MAML1 (human) mapping to 5q35.3.

SOURCE

Mam1 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Mam1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-18506 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

Mam1 (N-20) is recommended for detection of Mam1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

Mam1 (N-20) is also recommended for detection of Mam1 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for Mam1 siRNA (h): sc-40731, Mam1 shRNA Plasmid (h): sc-40731-SH and Mam1 shRNA (h) Lentiviral Particles: sc-40731-V.

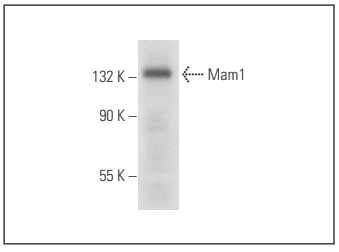
Molecular Weight of Mam1: 140 kDa.

Positive Controls: SK-N-MC nuclear extract: sc-2154 or HeLa whole cell lysate: sc-2200.

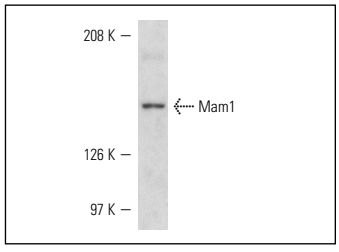
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/ 2.0 ml). 3) 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.

DATA



Mam1 (N-20): sc-18506. Western blot analysis of Mam1 expression in HeLa whole cell lysate.



Mam1 (N-20): sc-18506. Western blot analysis of Mam1 expression in SK-N-MC nuclear extract.

SELECT PRODUCT CITATIONS

1. Oyama, T., et al. 2007. Mastermind-1 is required for Notch signal-dependent steps in lymphocyte development *in vivo*. Proc. Natl. Acad. Sci. USA 104: 9764-9769.
2. Chen, J., et al. 2010. Hypoxia potentiates Notch signaling in breast cancer leading to decreased E-cadherin expression and increased cell migration and invasion. Br. J. Cancer 102: 351-360.

RESEARCH USE

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