SANTA CRUZ BIOTECHNOLOGY, INC.

MATH-1 (M-156): sc-98520

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The *Drosophila* atonal gene produces a protein with basic helix-loop-helix (bHLH) domains that plays an essential role in the development of the *Drosophila* nervous system. Mammalian atonal homolog 1 (MATH-1) is a helix-loop-helix (HLH) transcription factor that is structurally homologous to the product of the *Drosophila* proneural gene atonal. MATH-1, so known as Atoh1, Ath1 or HATH-1, is a 351 amino acid protein with an atonal-related basic HLH domain. In mice, expression of MATH-1 takes place by embryonic day 9.5 and initially localizes to the cranial ganglions and the dorsal part of the central nervous system. Prominent expression of MATH-1 is in the dorsal part of the central nervous system but becomes restricted to the external granular layer of the cerebellum by day 18 and is undetectable in the adult nervous system. It is suggested that MATH-1 may play a role in the differentiation of subsets of neural cells by activating E box-dependent transcription.

CHROMOSOMAL LOCATION

Genetic locus: ATOH1 (human) mapping to 4q22.2; Atoh1 (mouse) mapping to 6 C1.

SOURCE

MATH-1 (M-156) is a rabbit polyclonal antibody raised against amino acids 1-156 mapping at the N-terminus of MATH-1 of mouse origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

MATH-1 (M-156) is recommended for detection of MATH-1 of mouse, rat and 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).

MATH-1 (M-156) is also recommended for detection of MATH-1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for MATH-1 siRNA (h): sc-42070, MATH-1 siRNA (m): sc-42071, MATH-1 shRNA Plasmid (h): sc-42070-SH, MATH-1 shRNA Plasmid (m): sc-42071-SH, MATH-1 shRNA (h) Lentiviral Particles: sc-42070-V and MATH-1 shRNA (m) Lentiviral Particles: sc-42071-V.

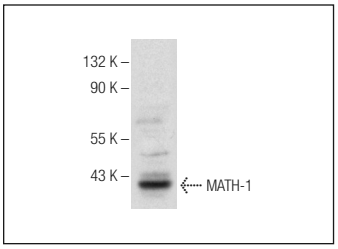
Molecular Weight of MATH-1: 45 kDa.

Positive Controls: mouse brain extract: sc-2253.

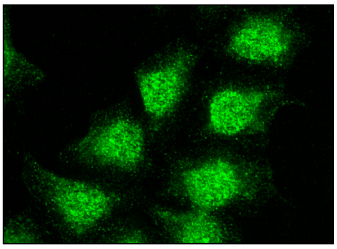
RECOMMENDED SECONDARY REAGENTS

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



MATH-1 (M-156): sc-98520. Western blot analysis of MATH-1 expression in mouse brain tissue extract.



MATH-1 (M-156): sc-98520. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

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.

MONOS Satisfaction Guaranteed

Try **MATH-1 (18A6): sc-136173** or **MATH-1 (H-6): sc-514145**, our highly recommended monoclonal alternatives to MATH-1 (M-156).