

MATH-2 (3G7): sc-517009

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 2 (MATH-2) is a helix-loop-helix (HLH) transcription factor that is structurally homologous to the product of *Drosophila* atonal gene. MATH-2 is a 337 amino acid protein with an atonal-related basic HLH domain. In mice, expression of MATH-2 takes place by embryonic day 11.5 and initially localizes to the wall of brain vesicles and in the spinal cord. It is expressed in the cortical plate and the mantle layer in the developing central nervous system, and is limited to the nervous system in adults. Adult mouse cerebrums produce a high level of MATH-2 RNA with lower levels in other neuronal tissues. Research studies suggest that MATH-2 may function as a trans-acting factor involved in the development and maintenance of the mammalian nervous system.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: NEUROD6 (human) mapping to 7p14.3; Neurod6 (mouse) mapping to 6 B3.

SOURCE

MATH-2 (3G7) is a mouse monoclonal antibody raised against amino acids 246-337 representing partial length MATH-2 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

MATH-2 (3G7) is recommended for detection of MATH-2 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MATH-2 siRNA (h): sc-42072, MATH-2 siRNA (m): sc-42073, MATH-2 shRNA Plasmid (h): sc-42072-SH, MATH-2 shRNA Plasmid (m): sc-42073-SH, MATH-2 shRNA (h) Lentiviral Particles: sc-42072-V and MATH-2 shRNA (m) Lentiviral Particles: sc-42073-V.

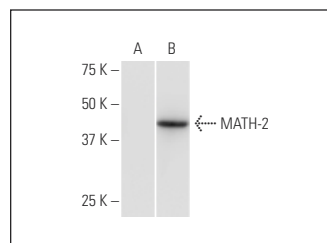
Molecular Weight of MATH-2: 39 kDa.

Positive Controls: MATH-2 transfected 293T whole cell lysate.

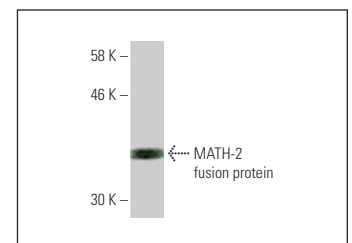
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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).

DATA



MATH-2 (3G7): sc-517009. Western blot analysis of MATH-2 expression in non-transfected (A) and MATH-2 transfected (B) 293T whole cell lysates.



MATH-2 (3G7): sc-517009. Western blot analysis of human recombinant MATH-2 fusion protein.

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.