SANTA CRUZ BIOTECHNOLOGY, INC.

EHM2 (F-19): sc-14233

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Neurofibromatosis type 2 (NF2) is an autosomal dominant disease characterized by the development of central nervous system tumors. The NF2 gene encodes a protein with homology to the band 4.1 superfamily, which includes Ezrin, Radixin, Moesin and Talin, as well as several protein tyrosine phosphatases. The NF2 protein links the Actin cytoskeleton to cell surface glycoproteins and suppresses cell growth *in vitro* and *in vivo*. In addition, NF2 impairs Actin cytoskeleton-associated processes. A novel gene, Ehm2, is expressed in high metastatic, but not in low metastatic, K-1735 murine melanoma cells. The EHM2 protein, a 527 amino acid polypeptide, is expressed in liver, lung, kidney and testis, as well as in also in 7- to 17-day embryos. EHM2 belongs to the NF2/ERM/4.1 superfamily of proteins, which function in connecting cell surface transmembrane proteins to cytoskeletal molecules.

REFERENCES

1. Belliveau, M.J., Lutchman, M., Claudio, J.O., Marineau, C. and Rouleau, G.A. 1995. Schwannomin: new insights into this member of the band 4.1 superfamily. Biochem. Cell Biol. 73: 733-737.
2. McCartney, B.M. and Fehon, R. G. 1996. Distinct Cellular and subcellular patterns of expression imply distinct functions for the *Drosophila* homologues of moesin and the neurofibromatosis 2 tumor suppressor, merlin. J. Cell Biol. 133: 843-852.
3. Hashimoto, Y., Shindo-Okada, N., Tani, M., Takeuchi, K., Toma, H. and Yokota, J. 1996. Identification of genes differentially expressed in association with metastatic potential of K-1735 murine melanoma by messenger RNA differential display. Cancer Res. 56: 5266-5671.
4. Xu, L., Gonzalez-Agosti, C., Beauchamp, R., Pinney, D., Sterner, C. and Ramesh, V. 1998. Analysis of molecular domains of epitope-tagged merlin isoforms in Cos-7 cells and primary rat Schwann cells. Exp. Cell Res. 238: 231-240.
5. Shimizu, K., Nagamachi, Y., Tani, M., Kimura, K., Shiroishi, T., Wakana, S. and Yokota, J. 2000. Molecular cloning of a novel NF2/ERM/4.1 superfamily gene, EHM2, that is expressed in high-metastatic K1735 murine melanoma cells. Genomics 65: 113-120.
6. Gutmann, D.H., Hirbe, A.C., Huang, Zy, and Haipek, C.A. 2001. The protein 4.1 tumor suppressor, dal-1, impairs cell motility, but regulates proliferation in a cell-type-specific fashion. Neurobiol. Dis. 8: 266-278.

CHROMOSOMAL LOCATION

Genetic locus: EPB41L4B (human) mapping to 9q31.3; Epb4.1l4b (mouse) mapping to 4 B3.

SOURCE

EHM2 (F-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of EHM2 of human origin.

STORAGE

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

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-14233 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

EHM2 (F-19) is recommended for detection of EHM2 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); may cross-react with EPB41L5 of human origin.

EHM2 (F-19) is also recommended for detection of EHM2 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for EHM2 siRNA (h): sc-43358, EHM2 siRNA (m): sc-43359, EHM2 shRNA Plasmid (h): sc-43358-SH, EHM2 shRNA Plasmid (m): sc-43359-SH, EHM2 shRNA (h) Lentiviral Particles: sc-43358-V and EHM2 shRNA (m) Lentiviral Particles: sc-43359-V.

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.

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.