SANTA CRUZ BIOTECHNOLOGY, INC.

JM4 (N-14): sc-168229

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The Power to Question

BACKGROUND

JM4 (Jena-Muenchen 4), also known as PRAF2 (PRA1 domain family, member 2), is a 178 amino acid endosomal multi-pass membrane protein involved in vesicular trafficking and endoplasmic reticulum/Golgi transport. As a member of the PRA1 family, JM4 contains four putative transmembrane domains, interacts with the CC chemokine receptor 5 (CCR5) and co-localizes with Calnexin in the ER and mannose 6-phosphate receptor (CD-MPR) in the Golgi apparatus. While ubiquitously expressed, JM4 has been found at high levels in small intestine, lung, pancreas, spleen, Purkinje cells of the cerebellum and in neuronal cells of the hippocampus, cerebral cortex and lateral ventricles of the brain. JM4 plays a proapoptic role in cerulenin-induced neuroblastoma apoptosis and has been implicated in human cancer. JM4, which serves as a candidate prognostic marker in neuroblastoma, is encoded by a gene that maps to human chromosome Xp11.23.

REFERENCES

1. Ross, R.A., Biedler, J.L. and Spengler, B.A. 2003. A role for distinct cell types in determining malignancy in human neuroblastoma cell lines and tumors. Cancer Lett. 197: 35-39.
2. Schweneker, M., Bachmann, A.S. and Moelling, K. 2005. JM4 is a four-transmembrane protein binding to the CCR5 receptor. FEBS Lett. 579: 1751-1758.
3. Fo, C.S., Coleman, C.S., Wallick, C.J., Vine, A.L. and Bachmann, A.S. 2006. Genomic organization, expression profile, and characterization of the new protein PRA1 domain family, member 2 (PRAF2). Gene 371: 154-165.
4. Geerts, D., Wallick, C.J., Koomoa, D.L., Koster, J., Versteeg, R., Go, R.C. and Bachmann, A.S. 2007. Expression of prenylated Rab acceptor 1 domain family, member 2 (PRAF2) in neuroblastoma: correlation with clinical features, cellular localization, and cerulenin-mediated apoptosis regulation. Clin. Cancer Res. 13: 6312-6319.
5. Speleman, F., De Preter, K., Hoebeeck, J., Van Roy, N. and Vandesompele, J. 2007. New insights into the genetic basis of neuroblastoma. Verh. K. Acad. Geneeskd. Belg. 69: 167-196.
6. Koomoa, D.L., Go, R.C., Wester, K. and Bachmann, A.S. 2008. Expression profile of PRAF2 in the human brain and enrichment in synaptic vesicles. Neurosci. Lett. 436: 171-176.

CHROMOSOMAL LOCATION

Genetic locus: PRAF2 (human) mapping to Xp11.23; Praf2 (mouse) mapping to X A1.1.

SOURCE

JM4 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal cytoplasmic domain of JM4 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-168229 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

JM4 (N-14) is recommended for detection of JM4 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).

JM4 (N-14) is also recommended for detection of JM4 in additional species, including equine and canine.

Suitable for use as control antibody for JM4 siRNA (h): sc-91097, JM4 siRNA (m): sc-146321, JM4 shRNA Plasmid (h): sc-91097-SH, JM4 shRNA Plasmid (m): sc-146321-SH, JM4 shRNA (h) Lentiviral Particles: sc-91097-V and JM4 shRNA (m) Lentiviral Particles: sc-146321-V.

Molecular Weight of JM4: 19 kDa.

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.