RTK (IVF6): sc-73523



The Power to Question

BACKGROUND

The marine sponge *Geodia cydonium* belongs to the phylum Porifera and exists as a multi-celled organism with a hollow body surrounded by a collagen-rich fibrous network. Like many other organisms, *Geodia cydonium* contains a receptor tyrosine kinase (RTK) that has an extracellular domain, a transmembrane region and a TK domain. In general, RTKs are high-affinity cell surface receptors that bind a variety of cytokines, hormones and growth factors and, via the phosphorylation of tyrosine residues, play an essential role in various signal transduction pathways. The *Geodia cydonium* RTK contains immunoglobulin-like domains and, like eukaryotic RTKs, is involved in the modulation of signaling events.

REFERENCES

- Schäcke, H., Rinkevich, B., Gamulin, V., Müller, I.M. and Müller, W.E. 1994. Immunoglobulin-like domain is present in the extracellular part of the receptor tyrosine kinase from the marine sponge *Geodia cydonium*. J. Mol. Recognit. 7: 273-276.
- Müller, W.E. and Schäcke, H. 1996. Characterization of the receptor proteintyrosine kinase gene from the marine sponge *Geodia cydonium*. Prog. Mol. Subcell. Biol. 17: 183-208.
- Müller, W.E. 1997. Origin of metazoan adhesion molecules and adhesion receptors as deduced from cDNA analyses in the marine sponge *Geodia* cydonium: a review. Cell Tissue Res. 289: 383-395.
- Skorokhod, A., Schäcke, H., Diehl-Seifert, B., Steffen, R., Hofmeister, A. and Müller, W.E. 1997. Immunochemical localization of the phylogenetically oldest receptor tyrosine kinase: existence in the marine sponge *Geodia cydonium*. Cell. Mol. Biol. 43: 509-519.
- Müller, W.E., Skorokhod, A. and Müller, I.M. 1999. Receptor tyrosine kinase, an autapomorphic character of metazoa: identification in marine sponges. Acta Biol. Hung. 50: 395-411.
- 6. Wimmer, W., Blumbach, B., Diehl-Seifert, B., Koziol, C., Batel, R., Steffen, R., Müller, I.M. and Müller, W.E. 1999. Increased expression of integrin and receptor tyrosine kinase genes during autograft fusion in the sponge *Geodia cydonium*. Cell Adhes. Commun. 7: 111-124.
- Müller, W.E., Kruse, M., Blumbach, B., Skorokhod, A. and Müller, I.M. 1999. Gene structure and function of tyrosine kinases in the marine sponge *Geodia cydonium*: autapomorphic characters in metazoa. Gene 238: 179-193.
- 8. Blumbach, B., Diehl-Seifert, B., Seack, J., Steffen, R., Müller, I.M. and Müller, W.E. 1999. Cloning and expression of new receptors belonging to the immunoglobulin superfamily from the marine sponge *Geodia cydonium*. Immunogenetics 49: 751-763.
- 9. Müller, W.E., Koziol, C., Müller, I.M. and Wiens, M. 1999. Towards an understanding of the molecular basis of immune responses in sponges: the marine demosponge *Geodia cydonium* as a model. Microsc. Res. Tech. 44: 219-236.

RESEARCH USE

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

SOURCE

RTK (IVF6) is a mouse monoclonal antibody raised against recombinant RTK of *Geodia cydonium* origin.

PRODUCT

Each vial contains 100 $\mu g \; lg G_1$ in 1.0 ml TBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

RTK (IVF6) is recommended for detection of RTK of *Geodia cydonium* 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 immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3800 fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com