



TAX-4 (cN-20): sc-12225

BACKGROUND

A variety of growth factor signaling molecules have been shown to regulate *C. elegans* development, including members of the EGF, FGF and TGF super-families. These factors bind to specific receptors and transduce extracellular signals to the nucleus. Receptor tyrosine kinase/Ras pathways also play a critical role in cell signaling and are responsible for proper vulval development. In vertebrate visual and olfactory systems, a cyclic nucleotide-gated channel couples receptor activation to electrical activity of the sensory neurons. TAX-4 and TAX-2 are essential for normal olfaction, gustation, chemosensation, thermosensation, normal axon outgrowth of some sensory neurons and may have a role in sensory transduction. TAX-4 and TAX-2 are similar to the cyclic nucleotide-gated channel subunits used in vertebrate vision and olfaction. TAX-4 is highly related to the α subunits, while TAX-2 is most closely related to the beta subunits of the rod phototransduction channels.

REFERENCES

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2. Sternberg, P.W., Lesa, G., Lee, J., Katz, W.S., Yoon, C., Clandinin, T.R., Huang, L.S., Chamberlin, H.M., and Jongeward, G. 1995. LET-23-mediated signal transduction during *Caenorhabditis elegans* development. *Mol. Reprod. Dev.* 42: 523-528.
3. Coburn, C.M. and Bargmann, C.I. 1996. A putative cyclic nucleotide-gated channel is required for sensory development and function in *C. elegans*. *Neuron* 17: 695-706.
4. Komatsu, H., Mori, I., Rhee, J.S., Akaike, N., and Ohshima, Y. 1996. Mutations in a cyclic nucleotide-gated channel lead to abnormal thermosensation and chemosensation in *C. elegans*. *Neuron* 17: 707-718.
5. Coburn, C.M., Mori, I., Ohshima, Y., and Bargmann, C.I. 1998. A cyclic nucleotide-gated channel inhibits sensory axon outgrowth in larval and adult *Caenorhabditis elegans*: a distinct pathway for maintenance of sensory axon structure. *Development* 125: 249-258.
6. Komatsu, H., Jin, Y.H., L'Etoile, N., Mori, I., Bargmann, C.I., Akaike, N., and Ohshima, Y. 1999. Functional reconstitution of a heteromeric cyclic nucleotide-gated channel of *Caenorhabditis elegans* in cultured cells. *Brain Res.* 821: 160-168.

SOURCE

TAX-4 (cN-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of TAX-4 of *C. elegans* origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-12225 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TAX-4 (cN-20) is recommended for detection of TAX-4 of *Caenorhabditis elegans* 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).

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.

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.

PROTOCOLS

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