

Axotrophin (R-20): sc-49277

BACKGROUND

Axotrophin is a stem cell gene that encodes a protein which is involved in T lymphocyte regulation (especially in regulating the proliferation) and leukemia inhibitory factor (LIF) release. LIF is a neuropoietic cytokine that is important for stem cell regulation and thymocyte stimulation. Both Axotrophin and LIF are linked to transplantation intolerance. Axotrophin is also involved in corpus callosum differentiation and may play a role in glial cell line-derived neurotrophic factor (GDNF)-dependent sensory neuron survival in the substantia gelatinosa of the adult spinal cord. Axotrophin is primarily expressed in the hippocampus, cortex, purkinje and granule cells of the cerebellum.

REFERENCES

- Escary, J.L., Perreau, J., Dumenil, D., Ezine, S. and Brûlet, P. 1993. Leukaemia stem cells and thymocyte stimulation. *Nature* 363: 361-364.
- Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 159540. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Metcalfe, S.M. and De S Muthukumarana, P.A. 2004. Transplantation tolerance: gene expression profiles comparing allotolerance vs. allojection. *Int. Immunopharmacol.* 5: 33-39.
- Metcalfe, S.M., Muthukumarana, P.A., Thompson, H.L., Haendel, M.A. and Lyons, G.E. 2005. Leukaemia inhibitory factor (LIF) is functionally linked to Axotrophin and both LIF and Axotrophin are linked to regulatory immune tolerance. *FEBS Lett.* 579: 609-614.
- Metcalfe, S.M. 2005. Axotrophin and leukaemia inhibitory factor (LIF) in transplantation tolerance. *Philos. Trans. R. Soc. Lond., B, Biol. Sci.* 360: 1687-1694.

CHROMOSOMAL LOCATION

Genetic locus: MARCH7 (human) mapping to 2q24.2; March7 (mouse) mapping to 2 C1.1.

SOURCE

Axotrophin (R-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Axotrophin of human origin.

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-49277 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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 or our catalog for detailed protocols and support products.

APPLICATIONS

Axotrophin (R-20) is recommended for detection of Axotrophin of human and, to a lesser extent, mouse and rat 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).

Axotrophin (R-20) is also recommended for detection of Axotrophin in additional species, including equine and canine.

Suitable for use as control antibody for Axotrophin siRNA (h): sc-60235, Axotrophin siRNA (m): sc-60236, Axotrophin shRNA Plasmid (h): sc-60235-SH, Axotrophin shRNA Plasmid (m): sc-60236-SH, Axotrophin shRNA (h) Lentiviral Particles: sc-60235-V and Axotrophin shRNA (m) Lentiviral Particles: sc-60236-V.

Molecular Weight of Axotrophin: 78 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

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.