

Axotrophin (B-2): sc-166945

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., et al. 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. 2005. Transplantation tolerance: gene expression profiles comparing allotolerance vs. allo rejection. *Int. Immunopharmacol.* 5: 33-39.
- Metcalfe, S.M., et al. 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.

CHROMOSOMAL LOCATION

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

SOURCE

Axotrophin (B-2) is a mouse monoclonal antibody raised against amino acids 583-642 mapping near the C-terminus of Axotrophin of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Axotrophin (B-2) is available conjugated to agarose (sc-166945 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166945 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166945 PE), fluorescein (sc-166945 FITC), Alexa Fluor[®] 488 (sc-166945 AF488), Alexa Fluor[®] 546 (sc-166945 AF546), Alexa Fluor[®] 594 (sc-166945 AF594) or Alexa Fluor[®] 647 (sc-166945 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-166945 AF680) or Alexa Fluor[®] 790 (sc-166945 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

Axotrophin (B-2) is recommended for detection of Axotrophin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

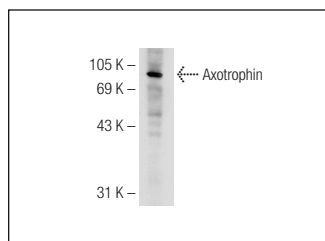
Molecular Weight of Axotrophin: 78 kDa.

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

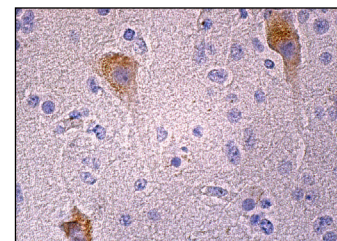
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Axotrophin (B-2): sc-166945. Western blot analysis of Axotrophin expression in K-562 whole cell lysate.



Axotrophin (B-2): sc-166945. Immunoperoxidase staining of formalin fixed, paraffin-embedded human brain tissue showing cytoplasmic staining of neuronal cells.

SELECT PRODUCT CITATIONS

- Zhao K., et al. 2018. Regulation of the Mdm2-p53 pathway by the ubiquitin E3 ligase MARCH7. *EMBO Rep.* 19: 305-319.
- Cai, B., et al. 2021. USP5 attenuates NLRP3 inflammasome activation by promoting autophagic degradation of NLRP3. *Autophagy*. E-published.

RESEARCH USE

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