

LHX9 (A-9): sc-515059

BACKGROUND

During development, genetically distinct subtypes of motor neurons express unique combinations of LIM-type homeodomain factors, which regulate cell migration and guide motor axons to establish the fidelity of a binary choice in axonal trajectory. The LIM gene family encodes a set of gene products, which carry the LIM domain, a unique cysteine-rich zinc-binding domain. At least 40 members of this family have been identified in vertebrates and invertebrates, and are distributed into 4 groups according to the number of LIM domains and to the presence of homeodomains and kinase domains. The human LHX9 gene maps to chromosome 1q31.3 and encodes a 388 amino acid protein. LHX9 is closely related to LHX2 and is expressed in the developing central nervous system. LHX9 influences the control of cell differentiation of several neural cell types and may act in a combinatorial manner with other LIM-homeodomain factors expressed in overlapping patterns.

REFERENCES

- Bertuzzi, S., et al. 1999. Characterization of LHX9, a novel LIM/homeobox gene expressed by the pioneer neurons in the mouse cerebral cortex. *Mech. Dev.* 81: 193-198.
- Lilly, B., et al. 1999. The LIM homeodomain protein dLim1 defines a subclass of neurons within the embryonic ventral nerve cord of *Drosophila*. *Mech. Dev.* 88: 195-205.
- Retaux, S., et al. 1999. LHX9: a novel LIM-homeodomain gene expressed in the developing forebrain. *J. Neurosci.* 19: 783-793.
- Sharma, K., et al. 2000. Genetic and epigenetic mechanisms contribute to motor neuron pathfinding. *Nature* 406: 515-519.
- Cheah, S.S., et al. 2000. Requirement of LIM domains for LIM1 function in mouse head development. *Genesis* 27: 12-21.

CHROMOSOMAL LOCATION

Genetic locus: LHX9 (human) mapping to 1q31.3; Lhx9 (mouse) mapping to 1 F.

SOURCE

LHX9 (A-9) is a mouse monoclonal antibody raised against amino acids 19-70 mapping near the N-terminus of LHX9 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LHX9 (A-9) is available conjugated to agarose (sc-515059 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515059 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515059 PE), fluorescein (sc-515059 FITC), Alexa Fluor® 488 (sc-515059 AF488), Alexa Fluor® 546 (sc-515059 AF546), Alexa Fluor® 594 (sc-515059 AF594) or Alexa Fluor® 647 (sc-515059 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515059 AF680) or Alexa Fluor® 790 (sc-515059 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

LHX9 (A-9) is recommended for detection of LHX9 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for LHX9 siRNA (h): sc-38719, LHX9 siRNA (m): sc-38720, LHX9 shRNA Plasmid (h): sc-38719-SH, LHX9 shRNA Plasmid (m): sc-38720-SH, LHX9 shRNA (h) Lentiviral Particles: sc-38719-V and LHX9 shRNA (m) Lentiviral Particles: sc-38720-V.

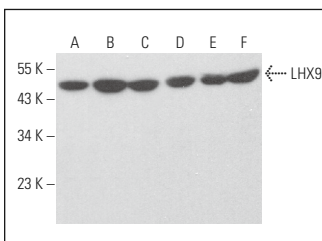
Molecular Weight of LHX9: 44 kDa.

Positive Controls: F9 cell lysate: sc-2245, IMR-32 cell lysate: sc-2409 or Jurkat whole cell lysate: sc-2204.

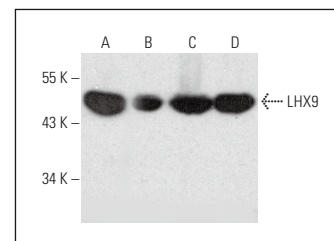
RECOMMENDED SUPPORT REAGENTS

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.

DATA



LHX9 (A-9): sc-515059. Western blot analysis of LHX9 expression in Jurkat (A), IMR-32 (B), THP-1 (C), TK-1 (D), F9 (E) and NIH/3T3 (F) whole cell lysates.



LHX9 (A-9): sc-515059. Western blot analysis of LHX9 expression in Jurkat (A), F9 (B), NIH/3T3 (C) and RPE-J (D) whole cell lysates.

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 for detailed protocols and support products.