

## LHX9 (N-20): sc-19348

### 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.
- Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 605992. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- LocusLink Report (LocusID: 3975). <http://www.ncbi.nlm.nih.gov/LocusLink/>

### CHROMOSOMAL LOCATIONS

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

### SOURCE

LHX9 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of LHX9 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-19348 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

LHX9 (N-20) is recommended for detection of LHX9 of mouse, rat and human 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).

LHX9 (N-20) is also recommended for detection of LHX9 in additional species, including equine, bovine and porcine.

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: Jurkat whole cell lysate: sc-2204.

### 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941.

### SELECT PRODUCT CITATIONS

- Hu, Y.C., et al. 2013. Gata4 is required for formation of the genital ridge in mice. *PLoS Genet.* 9: e1003629.

### 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](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **LHX9 (A-9): sc-515059**, our highly recommended monoclonal alternative to LHX9 (N-20).