

LHX6 (G-19): sc-69431

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 proteins which carry the LIM domain, a unique cysteine-rich zinc-binding motif. LHX6 (LIM homeobox 6), also known as LHX6.1, is a 363 amino acid nuclear protein that contains 2 LIM zinc-binding domains and one homeobox DNA-binding domain. Expressed specifically in brain, LHX6 is thought to function as a transcriptional regulator that may play a role in the development and differentiation of lymphoid and neural cells. Additionally, LHX6 is hypermethylated in head and neck carcinomas and may be a novel tumor marker. Two isoforms of LHX6, designated LHX6.1A and LHX6.1B, exist due to alternative splicing events.

REFERENCES

1. Grigoriou, M., Tucker, A.S., Sharpe, P.T. and Pachnis, V. 1998. Expression and regulation of LHX6 and LHX7, a novel subfamily of LIM homeodomain encoding genes, suggests a role in mammalian head development. *Development* 125: 2063-2074.
2. Kimura, N., Ueno, M., Nakashima, K. and Taga, T. 1999. A brain region-specific gene product LHX6.1 interacts with LDB1 through tandem LIM-domains. *J. Biochem.* 126: 180-187.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608215. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Gong, S., Zheng, C., Doughty, M.L., Losos, K., Didkovsky, N., Schambra, U.B., Nowak, N.J., Joyner, A., Leblanc, G., Hatten, M.E. and Heintz, N. 2003. A gene expression atlas of the central nervous system based on bacterial artificial chromosomes. *Nature* 425: 917-925.
5. Alifragis, P., Liapi, A. and Parnavelas, J.G. 2004. LHX6 regulates the migration of cortical interneurons from the ventral telencephalon but does not specify their GABA phenotype. *J. Neurosci.* 24: 5643-5648.

CHROMOSOMAL LOCATION

Genetic locus: LHX6 (human) mapping to 9q33.2; Lhx6 (mouse) mapping to 2 B.

SOURCE

LHX6 (G-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of LHX6 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-69431 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-69431 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LHX6 (G-19) is recommended for detection of LHX6 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

LHX6 (G-19) is also recommended for detection of LHX6 in additional species, including canine, bovine, porcine and avian.

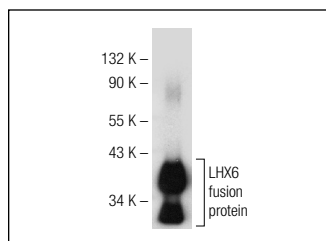
Suitable for use as control antibody for LHX6 siRNA (h): sc-75425, LHX6 siRNA (m): sc-75426, LHX6 shRNA Plasmid (h): sc-75425-SH, LHX6 shRNA Plasmid (m): sc-75426-SH, LHX6 shRNA (h) Lentiviral Particles: sc-75425-V and LHX6 shRNA (m) Lentiviral Particles: sc-75426-V.

LHX6 (G-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of LHX6: 40 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, DU 145 nuclear extract: sc-24960 or IMR-32 nuclear extract: sc-2148.

DATA



LHX6 (G-19): sc-69431. Western blot analysis of human recombinant LHX6 fusion protein.

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.

MONOS
Satisfaction
Guaranteed

Try **LHX6 (A-9): sc-271433** or **LHX6 (JJ-06): sc-81970**, our highly recommended monoclonal alternatives to LHX6 (G-19).