SANTA CRUZ BIOTECHNOLOGY, INC.

LHX2 (6G2): sc-517243

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 overlapping expression of LHX1, LHX3, LHX4, Isl-1 and Isl-2 in developing motor neurons along the spinal column may influence the establishment of specific motor neuron subtypes. The human LHX2 gene maps to chromosome 9q33.3 and encodes a 389 amino acid protein. LHX2 is involved in early patterning of the telencephalon, where the neuroepithelium is first divided into cortical tissue and cortical hem.

REFERENCES

1. 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.
2. Cheah, S.S., et al. 2000. Requirement of LIM domains for LIM1 function in mouse head development. Genesis 27: 12-21.
3. Sharma, K., et al. 2000. Genetic and epigenetic mechanisms contribute to motor neuron pathfinding. Nature 406: 515-519.
4. Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 603759. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Bulchand, S., et al. 2001. LIM-homeodomain gene LHX2 regulates the formation of the cortical hem. Mech. Dev. 100: 165-175.

CHROMOSOMAL LOCATION

Genetic locus: LHX2 (human) mapping to 9q33.3; Lhx2 (mouse) mapping to 2 B.

SOURCE

LHX2 (6G2) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 200-406 of LHX2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LHX2 (6G2) is available conjugated to agarose (sc-517243 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-517243 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-517243 PE), fluorescein (sc-517243 FITC), Alexa Fluor® 488 (sc-517243 AF488), Alexa Fluor® 546 (sc-517243 AF546), Alexa Fluor® 594 (sc-517243 AF594) or Alexa Fluor® 647 (sc-517243 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-517243 AF680) or Alexa Fluor® 790 (sc-517243 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

LHX2 (6G2) is recommended for detection of LHX2 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).

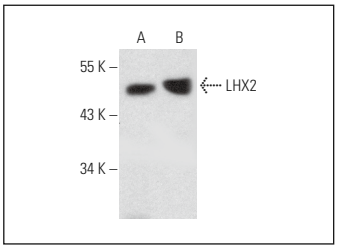
Suitable for use as control antibody for LHX2 siRNA (h): sc-38710, LHX2 siRNA (m): sc-38711, LHX2 shRNA Plasmid (h): sc-38710-SH, LHX2 shRNA Plasmid (m): sc-38711-SH, LHX2 shRNA (h) Lentiviral Particles: sc-38710-V and LHX2 shRNA (m) Lentiviral Particles: sc-38711-V.

Positive Controls: Daudi cell lysate: sc-2415, C2C12 whole cell lysate: sc-364188 or Neuro-2A whole cell lysate: sc-364185.

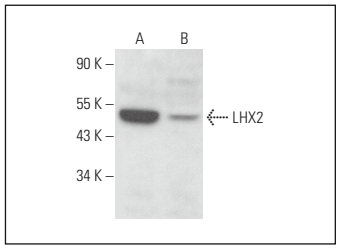
RECOMMENDED SUPPORT REAGENTS

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



LHX2 (6G2): sc-517243. Western blot analysis of LHX2 expression in Daudi (**A**) and C2C12 (**B**) whole cell lysates.



LHX2 (6G2): sc-517243. Western blot analysis of LHX2 expression in C2C12 (**A**) and Neuro-2A (**B**) 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.

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