SANTA CRUZ BIOTECHNOLOGY, INC.

# LHX5 (C-20): sc-19347

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 human LHX5 gene maps to chromosome 12q24.13 and encodes a 402 amino acid protein. The hippocampus contains the neural circuitry, which is crucial for cognitive functions such as learning and memory. LHX5 regulates precursor cell proliferation and neuronal differentiation and migration during hippocampal development.

## 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. Zhao, Y., et al. 1999. Control of hippocampal morphogenesis and neuronal differentiation by the LIM homeobox gene Lhx5. Science 284: 1155-1158.
3. Cheah, S.S., et al. 2000. Requirement of LIM domains for LIM1 function in mouse head development. Genesis 27: 12-21.
4. Sharma, K., et al. 2000. Genetic and epigenetic mechanisms contribute to motor neuron pathfinding. Nature 406: 515-519.
5. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 605992. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. LocusLink Report (LocusID: 3975). http://www.ncbi.nlm.nih.gov/LocusLink/


## CHROMOSOMAL LOCATIONS

Genetic locus: LHX5 (human) mapping to 12q24.13; Lhx5 (mouse) mapping to 5 F.

## SOURCE

LHX5 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of LHX5 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-19347 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-19347 X, 200 µg/0.1 ml.

## RESEARCH USE

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

## APPLICATIONS

LHX5 (C-20) is recommended for detection of LHX5 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).

LHX5 (C-20) is also recommended for detection of LHX5 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for LHX5 siRNA (h): sc-38716, LHX5 siRNA (m): sc-38717, LHX5 shRNA Plasmid (h): sc-38716-SH, LHX5 shRNA Plasmid (m): sc-38717-SH, LHX5 shRNA (h) Lentiviral Particles: sc-38716-V and LHX5 shRNA (m) Lentiviral Particles: sc-38717-V.

LHX5 (C-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of LHX5: 44 kDa.

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

## STORAGE

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

## PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.