SANTA CRUZ BIOTECHNOLOGY, INC.

LHX2 (N-20): sc-19342

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 motorneurons along the spinal column may influence the establishment of specific motorneuron 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.

CHROMOSMAL LOCATION

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

SOURCE

LHX2 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of LHX2 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-19342 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

LHX2 (N-20) 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).

LHX2 (N-20) is also recommended for detection of LHX2 in additional species, including canine, bovine, porcine and avian.

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.

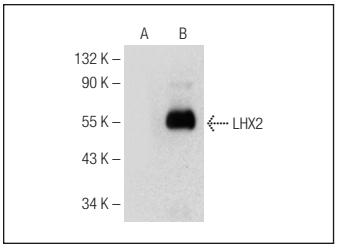
LHX2 (N-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Positive Controls: LHX2 (h): 293T Lysate: sc-369906.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



LHX2 (N-20): sc-19342. Western blot analysis of LHX2 expression in non-transfected: sc-117752 (**A**) and human LHX2 transfected: sc-369906 (**B**) 293T whole cell lysates.

SELECT PRODCT CITATIONS

1. Nakamura, M., et al. 2008. The localization of label-retaining cells in mouse nails. J. Invest. Dermatol. 128: 728-730.
2. Cai, Y., et al. 2008. Single-stranded DNA-binding proteins regulate the abundance and function of the LIM-homeodomain transcription factor LHX2 in pituitary cells. Biochem. Biophys. Res. Commun. 373: 303-308.
3. Gannon, H.S., et al. 2011. Mdm2-p53 signaling regulates epidermal stem cell senescence and premature aging phenotypes in mouse skin. Dev. Biol. 353: 1-9.
4. Honda, S., et al. 2012. LIM-homeodomain transcription factor, Lhx2, is involved in transcriptional control of brain-specific promoter/exon 1f of the mouse aromatase gene. J. Neuroendocrinol. 24: 1367-1374.
5. Li, R., et al. 2014. Isl1 and Pou4f2 form a complex to regulate target genes in developing retinal ganglion cells. PLoS ONE 9: e92105.

STORAGE

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