SANTA CRUZ BIOTECHNOLOGY, INC.

LHX1 (Q-25): sc-133735

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 LHX1 gene maps to chromosome 17q12 and encodes a 384 amino acid protein. The human LHX1 transcript is assembled from five exons, which are separated by introns ranging in size from 93 nt to 2.3 kb. The two LIM domains are entirely contained in the first and second exons, respectively, while the homeodomain is split into exons three and four.

CHROMOSOMAL LOCATION

Genetic locus: LHX1 (human) mapping to 17q12; Lhx1 (mouse) mapping to 11 C.

SOURCE

LHX1 (Q-25) is a a Protein A purified rabbit polyclonal antibody raised against a C-terminal region of synthetic LHX1 peptide of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

STORAGE

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

APPLICATIONS

LHX1 (Q-25) is recommended for detection of LHX1 of mouse, rat, human and zebrafish 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

LHX1 (Q-25) is also recommended for detection of LHX1 in additional species, including bovine and canine.

Suitable for use as control antibody for LHX1 siRNA (h): sc-38708, LHX1 siRNA (m): sc-38709, LHX1 shRNA Plasmid (h): sc-38708-SH, LHX1 shRNA Plasmid (m): sc-38709-SH, LHX1 shRNA (h) Lentiviral Particles: sc-38708-V and LHX1 shRNA (m) Lentiviral Particles: sc-38709-V.

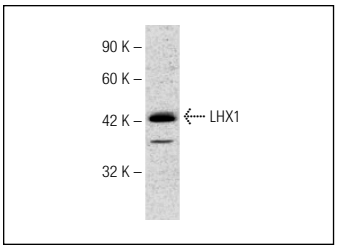
Molecular Weight of LHX1: 45 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

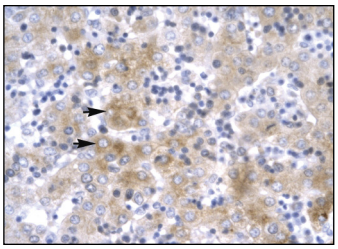
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



LHX1 (Q-25): sc-133735. Western blot analysis of LHX1 expression in Hep G2 whole cell lysate.



LHX1 (Q-25): sc-133735. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human liver tissue showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Li, R., et al. 2014. Isl1 and Pou4f2 form a complex to regulate target genes in developing retinal ganglion cells. PLoS ONE 9: e92105.

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.