

LHX2 (C-20): sc-19344

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 four 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.

CHROMOSOMAL LOCATION

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

SOURCE

LHX2 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-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-19344 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

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

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

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

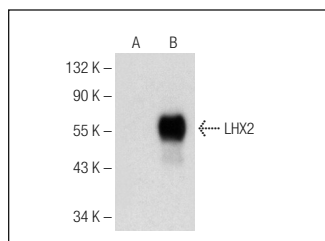
STORAGE

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

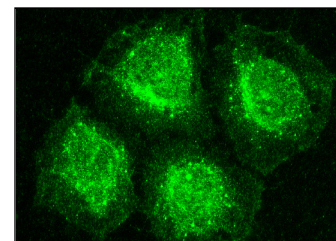
RESEARCH USE

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

DATA



LHX2 (C-20): sc-19344. Western blot analysis of LHX2 expression in non-transfected: sc-117752 (A) and human LHX2 transfected: sc-369906 (B) 293T whole cell lysates.



LHX2 (C-20): sc-19344. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and membrane localization.

SELECT PRODUCT CITATIONS

1. Kam, K.Y., et al. 2005. Oct-1 and nuclear factor Y bind to the SURG-1 element to direct basal and gonadotropin-releasing hormone (GnRH)-stimulated mouse GnRH receptor gene transcription. *Mol. Endoc.* 19: 148-162.
2. Sharov, A.A., et al. 2009. Bone morphogenetic protein antagonist Noggin promotes skin tumorigenesis via stimulation of the Wnt and Shh signaling pathways. *Am. J. Pathol.* 175: 1303-1314.
3. Miller, A.M., et al. 2010. Composition of the migratory mass during development of the olfactory nerve. *J. Comp. Neurol.* 518: 4825-4841.
4. Mardaryev, A.N., et al. 2011. Lhx2 differentially regulates Sox9, Tcf4 and Lgr5 in hair follicle stem cells to promote epidermal regeneration after injury. *Development* 138: 4843-4852.
5. Salvatierra, J., et al. 2014. The LIM homeodomain factor Lhx2 is required for hypothalamic tanycyte specification and differentiation. *J. Neurosci.* 34: 16809-16820.

PROTOCOLS

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

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Try **LHX2 (LHX2A12G1): sc-81311** or **LHX2 (6G2): sc-293161**, our highly recommended monoclonal alternatives to LHX2 (C-20).