

LHX8 (S-22): sc-133737

BACKGROUND

The LIM domain (a zinc finger structure) is a protein-protein interaction motif found in several protein superfamilies, including homeodomain transcription factors and kinases. The LIM family of homeodomain proteins play a role in organismal differentiation and development. During murine development, the LHX8 gene is expressed in the medial ganglionic eminence and the mesenchyme surrounding the oral cavity. Specifically, the LHX8 gene is expressed in the maxillary and mandibular processes and the ventral forebrain in the developing mouse embryo. Furthermore, Lhx8 is continuously expressed in the mesenchyme of mouse palatal structures and plays an essential role in palate development. LHX8^{-/-} mice develop a cleft secondary palate due to a failure of the palatal shelves to connect and fuse properly. The murine LHX8 gene, which is composed of nine exons and eight introns, maps to the distal portion of chromosome 3 (band H3-4).

REFERENCES

- Chen, B., Fan, M. and Zhou, C.M. 1997. LIM homeobox genes family in nervous system. *Sheng Li Ke Xue Jin Zhan* 28: 24-28.
- Kitanaka, J., Takemura, M., Matsumoto, K., Mori, T. and Wanaka, A. 1998. Structure and chromosomal localization of a murine LIM/homeobox gene, LHX8. *Genomics* 49: 307-309.
- Grigoriou, M., Tucker, A.S., Sharpe, P.T. and Pachnis, V. 1998. Expression and regulation of LHX6 and LHX7, a novel subfamily of LIM homeodomain encoding genes, suggests a role in mammalian head development. *Development* 125: 2063-2074.
- Zhao, Y., Guo, Y.J., Tomac, A.C., Taylor, N.R., Grinberg, A., Lee, E.J., Huang, S. and Westphal, H. 1999. Isolated cleft palate in mice with a targeted mutation of the LIM homeobox gene LHX8. *Proc. Natl. Acad. Sci. USA* 96: 15002-15006.
- Bach, I. 2000. The LIM domain: regulation by association. *Mech. Dev.* 91: 5-17.

CHROMOSOMAL LOCATION

Genetic locus: Lhx8 (mouse) mapping to 3 H4.

SOURCE

LHX8 (S-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of LHX8 of mouse 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-22216 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

LHX8 (S-12) is recommended for detection of LHX8 of mouse and rat 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).

LHX8 (S-12) is also recommended for detection of LHX8 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for LHX8 siRNA (m): sc-38718, LHX8 shRNA Plasmid (m): sc-38718-SH and LHX8 shRNA (m) Lentiviral Particles: sc-38718-V.

LHX8 (S-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

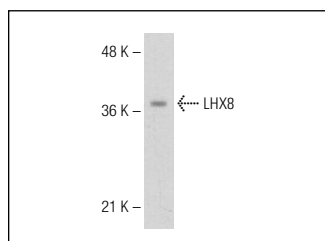
Molecular Weight of LHX8: 39 kDa.

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 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



LHX8 (S-22): sc-133737. Western blot analysis of LHX8 expression in Hep G2 whole cell lysate.

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.