

MIXL1 (H-50): sc-98664

BACKGROUND

The homeobox DNA-binding domain is a 60 amino acid motif that is conserved among many species and functions to bind DNA via a helix-turn-helix structure, thereby playing a role in transcriptional regulation and in the control of gene expression. MIXL1 (Mix1 homeobox-like 1), also known as MIXL, is a 232 amino acid protein that localizes to the nucleus and contains one homeobox DNA-binding domain. Expressed in lymph tissues, MIXL1 functions as a transcription factor that plays an essential role in axial mesoderm morphogenesis and endoderm formation and is also required for cellular differentiation during blood development. Additionally, MIXL1 is involved in maturation of heart and gut tissue during embryogenesis and may also act as a negative regulator of brachyury expression. Overexpression of MIXL1 is associated with non-Hodgkin and Hodgkin lymphomas, suggesting a role in carcinogenesis.

REFERENCES

- Guo, W., Chan, A.P., Liang, H., Wieder, E.D., Molldrem, J.J., Etkin, L.D. and Nagarajan, L. 2002. A human Mix-like homeobox gene MIXL shows functional similarity to *Xenopus* Mix.1. *Blood* 100: 89-95.
- Sahr, K., Dias, D.C., Sanchez, R., Chen, D., Chen, S.W., Gudas, L.J. and Baron, M.H. 2002. Structure, upstream promoter region, and functional domains of a mouse and human Mix paired-like homeobox gene. *Gene* 291: 135-147.
- Hart, A.H., Willson, T.A., Wong, M., Parker, K. and Robb, L. 2005. Transcriptional regulation of the homeobox gene MIXL1 by TGF- β and FoxH1. *Biochem. Biophys. Res. Commun.* 333: 1361-1369.
- Online Mendelian Inheritance in Man, OMIM[™]. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 609852. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Drakos, E., Rassidakis, G.Z., Leventaki, V., Guo, W., Medeiros, L.J. and Nagarajan, L. 2007. Differential expression of the human MIXL1 gene product in non-Hodgkin and Hodgkin lymphomas. *Hum. Pathol.* 38: 500-507.
- Metcalfe, D., Glaser, S., Mifsud, S., Di Rago, L. and Robb, L. 2007. The preleukemic state of mice reconstituted with MIXL1-transduced marrow cells. *Proc. Natl. Acad. Sci. USA* 104: 20013-20018.
- Davis, R.P., Ng, E.S., Costa, M., Mossman, A.K., Sourris, K., Elefanti, A.G. and Stanley, E.G. 2008. Targeting a GFP reporter gene to the MIXL1 locus of human embryonic stem cells identifies human primitive streak-like cells and enables isolation of primitive hematopoietic precursors. *Blood* 111: 1876-1884.

CHROMOSOMAL LOCATION

Genetic locus: MIXL1 (human) mapping to 1q42.12.

SOURCE

MIXL1 (H-50) is a rabbit polyclonal antibody raised against amino acids 141-190 mapping within an internal region of MIXL1 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-98664 X, 200 μ g/0.1 ml.

APPLICATIONS

MIXL1 (H-50) is recommended for detection of MIXL1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Suitable for use as control antibody for MIXL1 siRNA (h): sc-88374, MIXL1 shRNA Plasmid (h): sc-88374-SH and MIXL1 shRNA (h) Lentiviral Particles: sc-88374-V.

MIXL1 (H-50) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of MIXL1: 25 kDa.

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.

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.



Try **MIXL1 (A-8): sc-390976**, our highly recommended monoclonal alternative to MIXL1 (H-50).