

LMO1 (N-15): sc-10494

BACKGROUND

The LIM-only (LMO) proteins, LMO1 and LMO2, are nuclear factors that are characterized by a conserved LIM domain. The LIM domain consists of a cysteine-rich zinc-binding motif that is present in a variety of transcription factors, including the LIM homeobox (LHX) proteins expressed in the central nervous system and involved in cell differentiation. LMO1 and LMO2 are expressed in the adult CNS in a cell type-specific manner, where they are differentially regulated by neuronal activity and are involved in regulating the cellular differentiated phenotype of neurons. LMO2 lacks a specific DNA-binding homeobox domain but rather assembles into transcriptional regulatory complexes to mediate gene expression by interacting with the widely expressed nuclear LIM interactor (NLI). NLI, known also as CLIM-1, and the related protein CLIM-2 facilitate the formation of heteromeric LIM complexes and also enhance the nuclear retention of LIM proteins. LMO2 and the related protein LMO4 are expressed in thymic precursor cells. LMO4 is also expressed in mature T cells, cranial neural crest cells, somite, dorsal limb bud mesenchyme, motor neurons, and Schwann cell progenitors.

REFERENCES

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- Valge-Archer, V., et al. 1998. The LMO1 and LDB1 proteins interact in human T cell acute leukaemia with the chromosomal translocation t(11;14)(p15;q11). *Oncogene* 17: 3199-3202.
- Semina, E.V., et al. 1998. Cloning and chromosomal localization of two novel human genes encoding LIM-domain binding factors CLIM1 and CLIM2/LDB1/NLI. *Mamm. Genome* 9: 921-924.
- Kenny, D.A., et al. 1998. Identification and characterization of LMO4, an LMO gene with a novel pattern of expression during embryogenesis. *Proc. Natl. Acad. Sci. USA* 95: 11257-11262.
- Tse, E., et al. 1999. Characterization of the Lmo4 gene encoding a LIM-only protein: genomic organization and comparative chromosomal mapping. *Mamm. Genome* 10: 1089-1094.

CHROMOSOMAL LOCATION

Genetic locus: LMO1 (human) mapping to 11p15.4; Lmo1 (mouse) mapping to 7 E3.

SOURCE

LMO1 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of LMO1 of human origin.

STORAGE

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

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-10494 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-10494 X, 200 µg/0.1 ml.

APPLICATIONS

LMO1 (N-15) is recommended for detection of LMO1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

LMO1 (N-15) is also recommended for detection of LMO1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for LMO1 siRNA (h): sc-38025, LMO1 siRNA (m): sc-38026, LMO1 shRNA Plasmid (h): sc-38025-SH, LMO1 shRNA Plasmid (m): sc-38026-SH, LMO1 shRNA (h) Lentiviral Particles: sc-38025-V and LMO1 shRNA (m) Lentiviral Particles: sc-38026-V.

LMO1 (N-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of LMO1: 16 kDa.

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) 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.

SELECT PRODUCT CITATIONS

- Soma, M., et al. 2009. Development of the mouse amygdala as revealed by enhanced green fluorescent protein gene transfer by means of *in utero* electroporation. *J. Comp. Neurol.* 513: 113-128.

RESEARCH USE

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



Try **LMO1 (790C2a): sc-130628**, our highly recommended monoclonal alternative to LMO1 (N-15).