SANTA CRUZ BIOTECHNOLOGY, INC.

LMO4 (H-50): sc-22833

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

Genetic locus: LMO4 (human) mapping to 1p22.3; Lmo4 (mouse) mapping to 3 H2.

SOURCE

LMO4 (H-50) is a rabbit polyclonal antibody raised against amino acids 116-165 of LMO4 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.

STORAGE

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

APPLICATIONS

LMO4 (H-50) is recommended for detection of LMO4 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).

LMO4 (H-50) is also recommended for detection of LMO4 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for LMO4 siRNA (h): sc-38029, LMO4 siRNA (m): sc-38030, LMO4 shRNA Plasmid (h): sc-38029-SH, LMO4 shRNA Plasmid (m): sc-38030-SH, LMO4 shRNA (h) Lentiviral Particles: sc-38029-V and LMO4 shRNA (m) Lentiviral Particles: sc-38030-V.

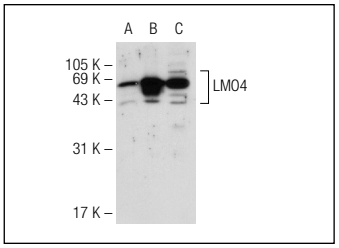
Molecular Weight of LMO4: 17 kDa.

Positive Controls: LMO4 (h): 293T Lysate: sc-173453, LMO4 (m3): 293T Lysate: sc-121361 or IMR-32 cell lysate: sc-2409.

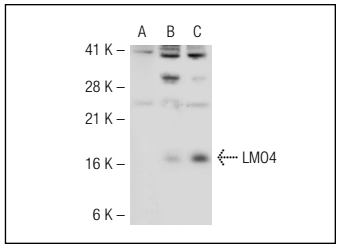
RECOMMENDED SECONDARY REAGENTS

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.

DATA



LMO4 (H-50): sc-22833. Western blot analysis of LMO4 expression in non-transfected 293T: sc-117752 (**A**), human LMO4 transfected 293T: sc-173453 (**B**) and IMR-32 (**C**) whole cell lysates.



LMO4 (H-50): sc-22833. Western blot analysis of LMO4 expression in non-transfected 293T: sc-117752 (**A**), mouse LMO4 transfected 293T: sc-121361 (**B**) and IMR-32 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Jamesdaniel, S., et al. 2012. Cisplatin-induced ototoxicity is mediated by nitroxidative modification of cochlear proteins characterized by nitration of Lmo4. J. Biol. Chem. 287: 18674-18686.

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.