SANTA CRUZ BIOTECHNOLOGY, INC.

LMO2 (N-16): sc-10497

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: LMO2 (human) mapping to 11p13; Lmo2 (mouse) mapping to 2 E2.

SOURCE

LMO2 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of LMO2 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-10497 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-10497 X, 200 µg/0.1 ml.

APPLICATIONS

LMO2 (N-16) is recommended for detection of LMO2 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). LMO2 (N-16) is also recommended for detection of LMO2 in additional species, including bovine, porcine and avian.

Suitable for use as control antibody for LMO2 siRNA (h): sc-38027, LMO2 siRNA (m): sc-38028, LMO2 shRNA Plasmid (h): sc-38027-SH, LMO2 shRNA Plasmid (m): sc-38028-SH, LMO2 shRNA (h) Lentiviral Particles: sc-38027-V and LMO2 shRNA (m) Lentiviral Particles: sc-38028-V.

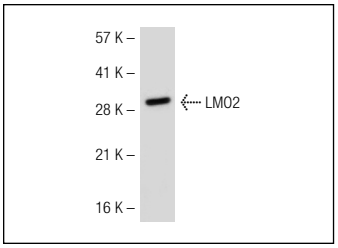
LMO2 (N-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of LMO2: 24 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) 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



LMO2 (N-16): sc-10497. Western blot analysis of LMO2 expression in H4 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Han, C., et al. 2005. Human Bex2 interacts with LMO2 and regulates the transcriptional activity of a novel DNA-binding complex. Nucleic Acids Res. 33: 6555-6565.
2. Lécuyer, E., et al. 2007. Protein stability and transcription factor complex assembly determined by the SCL-LMO2 interaction. J. Biol. Chem. 282: 33649-33658.
3. Kim, J.Y., et al. 2012. KDM3B is the H3K9 demethylase involved in transcriptional activation of lmo2 in leukemia. Mol. Cell. Biol. 32: 2917-2933.
4. Chen, Y.F., et al. 2014. Zhankuic acid A as a novel JAK2 inhibitor for the treatment of concanavalin A-induced hepatitis. Biochem. Pharmacol. 91: 217-230.
5. Kim, K.B., et al. 2015. H3K9 methyltransferase G9a negatively regulates UHRF1 transcription during leukemia cell differentiation. Nucleic Acids Res. 43: 3509-3523.

RESEARCH USE

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