SANTA CRUZ BIOTECHNOLOGY, INC.

CLIM-2 (A-4): sc-514035

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.

REFERENCES

1. Grutz, G., et al. 1998. Identification of the LMO4 gene encoding an interaction partner of the LIM-binding protein LDB1/NLI1: a candidate for displacement by LMO proteins in T cell acute leukaemia. Oncogene 17: 2799-2803.
2. 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.
3. 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: LDB1 (human) mapping to 10q24.32; Ldb1 (mouse) mapping to 19 C3.

SOURCE

CLIM-2 (A-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 23-47 near the N-terminus of CLIM-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain 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-514035 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-514035 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

CLIM-2 (A-4) is recommended for detection of CLIM-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for CLIM-2 siRNA (h): sc-35072, CLIM-2 siRNA (m): sc-35073, CLIM-2 shRNA Plasmid (h): sc-35072-SH, CLIM-2 shRNA Plasmid (m): sc-35073-SH, CLIM-2 shRNA (h) Lentiviral Particles: sc-35072-V and CLIM-2 shRNA (m) Lentiviral Particles: sc-35073-V.

CLIM-2 (A-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

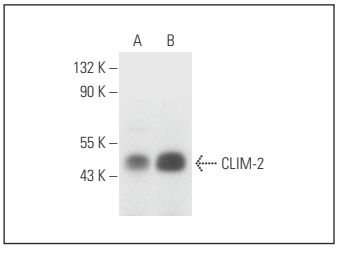
Molecular Weight of CLIM-2: 46 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, Jurkat whole cell lysate: sc-2204 or CCRF-CEM cell lysate: sc-2225.

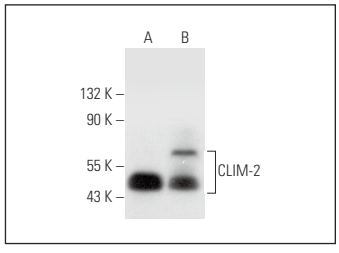
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



CLIM-2 (A-4): sc-514035. Western blot analysis of CLIM-2 expression in HeLa nuclear extract (**A**) and CCRF-CEM whole cell lysate (**B**).



CLIM-2 (A-4): sc-514035. Western blot analysis of CLIM-2 expression in CCRF-CEM (**A**) and Jurkat (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Zhu, M., et al. 2022. LIM-domain-binding protein 1 mediates cell proliferation and drug resistance in colorectal cancer. Front. Surg. 8: 790380.

RESEARCH USE

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