

L3MBTL (D-9): sc-166905

BACKGROUND

L3MBTL is member of the Polycomb group of proteins that function as transcriptional repressors in large protein complexes. L3MBTL contains 3 repeats of 100 residues called MBT repeats, and a C-terminal α -helical structure within a cavity lined by aromatic amino acids. The protein undergoes monoallelic methylation in hematopoietic tissues and is expressed in most human adult normal tissues. During interphase, L3MBTL localizes to the nucleus and completely associates with condensed chromosomes in mitotic cells. Together with Trithorax group proteins, L3MBTL is responsible for the coordinated regulation of patterns of gene activity. The human L3MBTL gene lies in a region of chromosome 20q13.12 that is frequently deleted in patients with myeloid malignancies and has been proposed as a candidate 20q tumor suppressor gene, implicating L3MBTL expression in some cases of myeloid leukemia.

REFERENCES

1. Koga, H., et al. 1999. A human homolog of *Drosophila* lethal(3)malignant brain tumor (L3MBT) protein associates with condensed mitotic chromosomes. *Oncogene* 18: 3799-3809.
2. Boccuni, P., et al. 2003. The human L3MBT interacts physically and functionally with TEL (ETV6). *J. Biol. Chem.* 278: 15412-15420.
3. Sathyamurthy, A., et al. 2003. Crystal structure of the malignant brain tumor (MBT) repeats in sex comb on Midleg-like 2 (SCML2). *J. Biol. Chem.* 278: 46968-46973.
4. Wang, W.K., et al. 2003. Malignant brain tumor repeats: a three-leaved propeller architecture with ligand/peptide binding pockets. *Structure* 11: 775-789.

CHROMOSOMAL LOCATION

Genetic locus: L3MBTL (human) mapping to 20q13.12.

SOURCE

L3MBTL (D-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 400-430 within an internal region of L3MBTL of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

L3MBTL (D-9) is available conjugated to agarose (sc-166905 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166905 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166905 PE), fluorescein (sc-166905 FITC), Alexa Fluor[®] 488 (sc-166905 AF488), Alexa Fluor[®] 546 (sc-166905 AF546), Alexa Fluor[®] 594 (sc-166905 AF594) or Alexa Fluor[®] 647 (sc-166905 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-166905 AF680) or Alexa Fluor[®] 790 (sc-166905 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166905 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

L3MBTL (D-9) is recommended for detection of L3MBTL of human origin by Western Blotting (starting dilution 1:100, 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 L3MBTL siRNA (h): sc-60915, L3MBTL shRNA Plasmid (h): sc-60915-SH and L3MBTL shRNA (h) Lentiviral Particles: sc-60915-V.

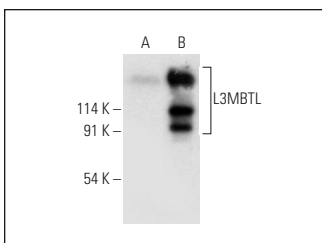
Molecular Weight of L3MBTL: 86 kDa.

Positive Controls: L3MBTL (h): 293T Lysate: sc-115550, CCRF-CEM nuclear extract: sc-2146 or U-87 MG cell lysate: sc-2411.

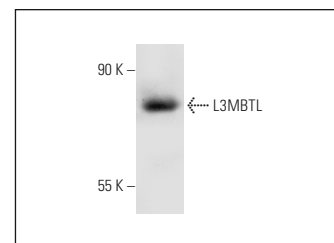
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



L3MBTL (D-9): sc-166905. Western blot analysis of L3MBTL expression in non-transfected: sc-117752 (A) and human L3MBTL transfected: sc-115550 (B) 293T whole cell lysates.



L3MBTL (D-9): sc-166905. Western blot analysis of L3MBTL expression in U-87 MG whole cell lysate.

SELECT PRODUCT CITATIONS

1. Wang, D., et al. 2021. ATM-phosphorylated SPOP contributes to 53BP1 exclusion from chromatin during DNA replication. *Sci. Adv.* 7: eabd9208.

STORAGE

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

RESEARCH USE

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

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