

L3MBTL (S-18): sc-50040

BACKGROUND

L3MBTL is a member of the Polycomb group of proteins that function as transcriptional repressors in large protein complexes. L3MBTL contains three 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 20 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

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2. Boccuni, P., et al. 2003. The human L(3)MBT 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 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.
5. Bench, A.J., et al. 2004. Characterization of the imprinted Polycomb gene L3MBTL, a candidate 20q tumour suppressor gene, in patients with myeloid malignancies. *Br. J. Haematol.* 127: 509-518.
6. Li, J., et al. 2004. Imprinting of the human L3MBTL gene, a Polycomb family member located in a region of chromosome 20 deleted in human myeloid malignancies. *Proc. Natl. Acad. Sci. USA* 101: 7341-7346.
7. MacGrogan, D., et al. 2004. Structural integrity and expression of the L3MBTL gene in normal and malignant hematopoietic cells. *Genes Chromosomes Cancer* 41: 203-213.
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CHROMOSOMAL LOCATION

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

SOURCE

L3MBTL (S-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of L3MBTL 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 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-50040 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

L3MBTL (S-18) is recommended for detection of L3MBTL of human origin by Western Blotting (starting dilution 1:200, 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); also recommended for L3MBTL isoforms 2, 3 and 4.

L3MBTL (S-18) is also recommended for detection of L3MBTL in additional species, including canine, bovine and porcine.

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.

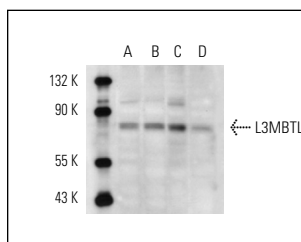
Molecular Weight of L3MBTL: 86 kDa.

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

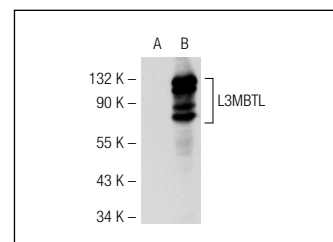
RECOMMENDED SECONDARY REAGENTS

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



L3MBTL (S-18): sc-50040. Western blot analysis of L3MBTL expression in HEL 92.1.7 (A), CCRF-CEM (B) and SK-N-MC (C) nuclear extracts and U-87 MG whole cell lysate (D).



L3MBTL (S-18): sc-50040. Western blot analysis of L3MBTL expression in non-transfected: sc-117752 (A) and human L3MBTL transfected: sc-115550 (B) 293T whole cell lysates.

RESEARCH USE

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