

LEMD1 (M-14): sc-164857

BACKGROUND

LEMD1 (LEM domain-containing protein 1), also known as cancer/testis antigen 50, is a 181 amino acid protein containing one LEM domain. The LEM domain is conserved in various nuclear-membrane proteins. A single-pass membrane protein, LEMD1 is testis-specific. Six isoforms of LEMD1 are produced by alternative splicing events, with isoform 6 being detected in 17 or 18 colon cancer tissues examined. It has been suggested that increased expression of LEMD1 may be involved in the mitosis of rapidly growing cancer cells. The gene encoding LEMD1 maps to human chromosome 1 and mouse chromosome 1 E4. Chromosome 1 is the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome. There are about 3,000 genes on chromosome 1, and considering the great number of genes there are also a large number of diseases associated with chromosome 1, including Schizophrenia, Stickler syndrome, Parkinsons and Gaucher disease.

REFERENCES

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2. Blackwood, D.H., et al. 2001. Schizophrenia and affective disorders— cosegregation with a translocation at chromosome 1q42 that directly disrupts brain-expressed genes: clinical and P300 findings in a family. *Am. J. Hum. Genet.* 69: 428-433.
3. Yuki, D., et al. 2004. Isolation of LEM domain-containing 1, a novel testis-specific gene expressed in colorectal cancers. *Oncol. Rep.* 12: 275-280.
4. Weise, A., et al. 2005. New insights into the evolution of chromosome 1. *Cytogenet. Genome Res.* 108: 217-222.
5. Marzin, Y., et al. 2006. Chromosome 1 abnormalities in multiple myeloma. *Anticancer Res.* 26: 953-959.
6. Wagner, N., et al. 2007. LEM-Domain proteins: new insights into lamin-interacting proteins. *Int. Rev. Cytol.* 261: 1-46.
7. Ghafouri-Fard, S., et al. 2010. Expression of two testis-specific genes, SPATA19 and LEMD1, in prostate cancer. *Arch. Med. Res.* 41: 195-200.

CHROMOSOMAL LOCATION

Genetic locus: *Lemd1* (mouse) mapping to 1 E4.

SOURCE

LEMD1 (M-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of LEMD1 of mouse origin.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

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-164857 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LEMD1 (M-14) is recommended for detection of LEMD1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with LEMD2.

Suitable for use as control antibody for LEMD1 siRNA (m): sc-146700, LEMD1 shRNA Plasmid (m): sc-146700-SH and LEMD1 shRNA (m) Lentiviral Particles: sc-146700-V.

Molecular Weight of LEMD1 isoforms 1/2/3: 20/3/16 kDa.

Molecular Weight of LEMD1 isoforms 4/5/6: 8/12/8 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 Blotting A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) 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.

RESEARCH USE

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