SANTA CRUZ BIOTECHNOLOGY, INC.

LEMD1 (A-6): sc-515122

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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

1. Watson, M.L., et al. 1990. Genomic organization of the selectin family of leukocyte adhesion molecules on human and mouse chromosome 1. J. Exp. Med. 172: 263-272.
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.

CHROMOSOMAL LOCATION

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

SOURCE

LEMD1 (A-6) is a mouse monoclonal antibody raised against amino acids 28-129 mapping within an internal region of LEMD1 of mouse 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.

LEMD1 (A-6) is available conjugated to agarose (sc-515122 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515122 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515122 PE), fluorescein (sc-515122 FITC), Alexa Fluor® 488 (sc-515122 AF488), Alexa Fluor® 546 (sc-515122 AF546), Alexa Fluor® 594 (sc-515122 AF594) or Alexa Fluor® 647 (sc-515122 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515122 AF680) or Alexa Fluor® 790 (sc-515122 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

LEMD1 (A-6) is recommended for detection of LEMD1 of mouse 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 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.

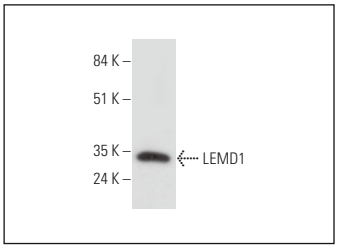
Molecular Weight of LEMD1 isoforms 4/5/6: 8/12/8 kDa.

Positive Controls: mouse testis extract: sc-2405.

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



LEMD1 (A-6): sc-515122. Western blot analysis of LEMD1 expression in mouse testis tissue extract.

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.

PROTOCOLS

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