

LEPREL4 (21): sc-136332

BACKGROUND

LEPREL4 (leprecan-like protein 4), also known as SC65 (synaptonemal complex protein SC65) or NOL55 (nucleolar autoantigen No55), is a 437 amino acid protein that belongs to the leprecan family. LEPREL4 is found specifically in the granular component of the nucleolus and during mitosis is found on the surface of chromosomes. LEPREL4 is post-translationally phosphorylated at tyrosine 234 and is encoded by a gene that maps to human chromosome 17. Chromosome 17 comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity by moderating cell fate through DNA repair versus cell death. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, though specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: P3H4 (human) mapping to 17q21.2; P3h4 (mouse) mapping to 11 D.

SOURCE

LEPREL4 (21) is a mouse monoclonal antibody raised against amino acids 140-335 of NOL55 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 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LEPREL4 (21) is available conjugated to agarose (sc-136332 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-136332 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-136332 PE), fluorescein (sc-136332 FITC), Alexa Fluor® 488 (sc-136332 AF488), Alexa Fluor® 546 (sc-136332 AF546), Alexa Fluor® 594 (sc-136332 AF594) or Alexa Fluor® 647 (sc-136332 AF647), 200 µg/ml, for WB (RGB), IF and IHC(P); and to either Alexa Fluor® 680 (sc-136332 AF680) or Alexa Fluor® 790 (sc-136332 AF790), 200 µg/ml, for Near-Infrared (NIR) WB and IF.

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APPLICATIONS

LEPREL4 (21) is recommended for detection of LEPREL4 of human and mouse origin and Sc65 of rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for LEPREL4 siRNA (h): sc-94183, LEPREL4 shRNA Plasmid (h): sc-94183-SH and LEPREL4 shRNA (h) Lentiviral Particles: sc-94183-V.

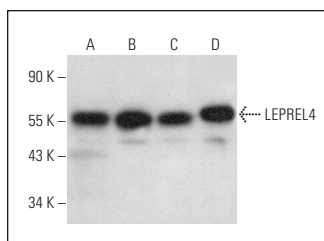
Molecular Weight of NOL55: 55 kDa.

Positive Controls: SW-13 cell lysate: sc-24778, HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

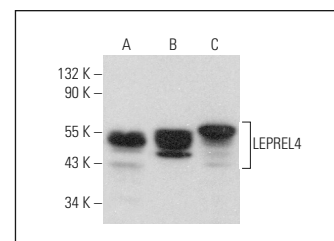
RECOMMENDED SUPPORT REAGENTS

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).

DATA



LEPREL4 (21): sc-136332. Western blot analysis of LEPREL4 expression in SW-13 (A), Hep G2 (B), HeLa (C) and NIH/3T3 (D) whole cell lysates.



LEPREL4 (21): sc-136332. Western blot analysis of LEPREL4 expression in SW-13 (A), 3T3-L1 (B) and ARPE-19 (C) whole cell lysates.

RESEARCH USE

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