SANTA CRUZ BIOTECHNOLOGY, INC.

LRG1 (D2): sc-517443

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

LRG1 (leucine-rich α_2-glycoprotein), also known as LRG, is a 347 amino acid secreted protein that contains eight LRR (leucine-rich) repeats and one LRRCT domain. The leucine-rich repeat (LRR) family of proteins, including LRG1, have been shown to be involved in protein-protein interaction, signal transduction, cell adhesion and development. Found mainly in plasma, LRG1 is expressed during granulocyte differentiation. The gene that encodes LRG1 consists of nearly 3,000 bases and maps to human chromosome 19p13.3. Chromosome 19 consists of over 63 million bases, houses approximately 1,400 genes and is recognized for having the greatest gene density of the human chromosomes. It is the genetic home for a number of immunoglobulin (Ig) superfamily members, including the killer cell and leukocyte Ig-like receptors, a number of ICAMs, the CEACAM and PSG families and Fc receptors (FcRs).

REFERENCES

1. Haupt, H. and Baudner, S. 1977. Isolation and characterization of an unknown, leucine-rich 3.1-S-α_2-glycoprotein from human serum (author's transl). Hoppe Seylers Z. Physiol. Chem. 358: 639-646.
2. Takahashi, N., et al. 1985. Periodicity of leucine and tandem repetition of a 24-amino acid segment in the primary structure of leucine-rich α_2-glycoprotein of human serum. Proc. Natl. Acad. Sci. USA 82: 1906-1910.
3. O'Donnell, L.C., et al. 2002. Molecular characterization and expression analysis of leucine-rich α_2-glycoprotein, a novel marker of granulocytic differentiation. J. Leukoc. Biol. 72: 478-485.
4. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611289. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Shirai, R., et al. 2009. Up-regulation of the expression of leucine-rich α_2-glycoprotein in hepatocytes by the mediators of acute-phase response. Biochem. Biophys. Res. Commun. 382: 776-779.
6. Codina, R., et al. 2010. Cytochrome c-induced lymphocyte death from the outside in: inhibition by serum leucine-rich α_2-glycoprotein-1. Apoptosis 15: 139-152.
7. Shirai, R., et al. 2010. Autologous extracellular cytochrome c is an endogenous ligand for leucine-rich α_2-glycoprotein and β-type phospholipase A_2 inhibitor. J. Biol. Chem. 285: 21607-21614.
9. Li, Y., et al. 2011. Proteomic identification of exosomal LRG1: a potential urinary biomarker for detecting NSCLC. Electrophoresis 32: 1976-1983.

CHROMOSOMAL LOCATION

Genetic locus: LRG1 (human) mapping to 19p13.3.

SOURCE

LRG1 (D2) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 37-340 of LRG1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

LRG1 (D2) is recommended for detection of LRG1 of human origin by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (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 LRG1 siRNA (h): sc-97202, LRG1 shRNA Plasmid (h): sc-97202-SH and LRG1 shRNA (h) Lentiviral Particles: sc-97202-V.

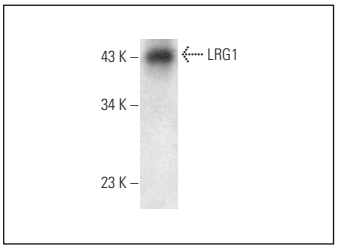
Molecular Weight of LRG1: 38 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209.

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



LRG1 (D2): sc-517443. Western blot analysis of LRG1 expression in DMSO-treated HL-60 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Yang, J., et al. 2023. Crystal structure of LRG1 and the functional significance of LRG1 glycan for LPHN2 activation. Exp. Mol. Med. 55: 1013-1022.

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.