SANTA CRUZ BIOTECHNOLOGY, INC.

LRRC8A (8H9): sc-517113

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Chromosome 9 consists of about 145 million bases and 4% of the human genome, encoding nearly 900 genes. Considered to play a role in gender determination, deletion of the distal portion of 9p can lead to development of male to female sex reversal, the phenotype of a female with a male X,Y genotype. Hereditary hemorrhagic telangiectasia, which is characterized by harmful vascular defects, is associated with the chromosome 9 gene-encoding Endoglin protein, ENG. Familial dysautonomia is also associated with chromosome 9 though through the gene IKBKAP. Notably, chromosome 9 encompasses the largest interferon family gene cluster. Chromosome 9 is partnered with chromosome 22 in the translocation leading to the aberrant production of Bcr-Abl fusion protein often found in leukemias.

REFERENCES

1. Fryns, J.P., et al. 1991. Apparent late-onset Cockayne syndrome and interstitial deletion of the long arm of chromosome 10 (del(10)(q11.23q21.2)). Am. J. Med. Genet. 40: 343-344.
2. Thöny, B., et al. 1994. Chromosomal location of two human genes encoding tetrahydrobiopterin-metabolizing enzymes: 6-pyruvoyl-tetrahydropterin synthase maps to 11q22.3-q23.3, and pterin-4 α-carbinolamine dehydratase maps to 10q22. Genomics 19: 365-368.

CHROMOSOMAL LOCATION

Genetic locus: LRRC8A (human) mapping to 9q34.11; Lrrc8a (mouse) mapping to 2 B.

SOURCE

LRRC8A (8H9) is a mouse monoclonal antibody raised against amino acids 711-810 representing partial length LRRC8A of human origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

LRRC8A (8H9) is recommended for detection of LRRC8A of mouse, rat and 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

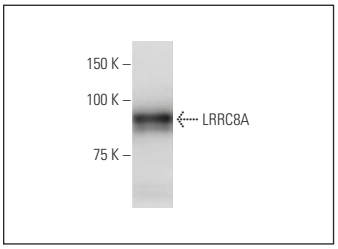
Suitable for use as control antibody for LRRC8A siRNA (h): sc-92566, LRRC8A siRNA (m): sc-149105, LRRC8A shRNA Plasmid (h): sc-92566-SH, LRRC8A shRNA Plasmid (m): sc-149105-SH, LRRC8A shRNA (h) Lentiviral Particles: sc-92566-V and LRRC8A shRNA (m) Lentiviral Particles: sc-149105-V.

Positive Controls: A-431 whole cell lysate: sc-2201.

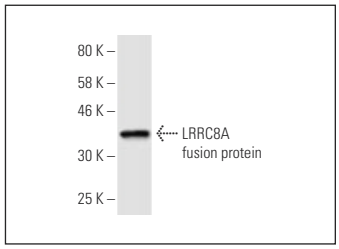
RECOMMENDED SUPPORT REAGENTS

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



LRRC8A (8H9); sc-517113. Western blot analysis of LRRC8A expression in A-431 whole cell lysate.



LRRC8A (8H9): sc-517113. Western blot analysis of human recombinant LRRC8A fusion protein.

SELECT PRODUCT CITATIONS

1. Netti, V., et al. 2018. Release of taurine and glutamate contributes to cell volume regulation in human retinal Müller cells: differences in modulation by calcium. J. Neurophysiol. 120: 973-984.
2. Zhang, H., et al. 2019. Novel insights into the role of LRRC8A in ameliorating alveolar fluid clearance in LPS induced acute lung injury. Eur. J. Pharmacol. 861: 172613.
3. Green, J.P., et al. 2020. LRRC8A is essential for hypotonicity-, but not for DAMP-induced NLRP3 inflammasome activation. Elife 9: e59704.
4. Cook, J.R., et al. 2022. LRRC8A is dispensable for a variety of microglial functions and response to acute stroke. Glia 70: 1068-1083.
5. Liu, J., et al. 2022. Inhibition of the LRRC8A channel promotes microglia/macrophage phagocytosis and improves outcomes after intracerebral hemorrhagic stroke. iScience 25: 105527.
6. Zhang, Y., et al. 2022. Inhibition of the LRRC8A channel promotes microglia/macrophag 2022. Polarized NHE1 and SWELL1 regulate migration direction, efficiency and metastasis. Nat. Commun. 13: 6128.
7. Liu, Y., et al. 2023. Interactions between the astrocytic volume-regulated anion channel and aquaporin 4 in hyposmotic regulation of vasopressin neuronal activity in the supraoptic nucleus. Cells 12: 1723.
8. Balkaya, M., et al. 2023. Conditional deletion of LRRC8A in the brain reduces stroke damage independently of swelling-activated glutamate release. iScience 26: 106669.

RESEARCH USE

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