SANTA CRUZ BIOTECHNOLOGY, INC.

PDLIM5 (JK-3R): sc-81813

BACKGROUND

PDLIM5 (PDZ and LIM domain 5), also known as L9, ENH (Enigma homolog), LIM or ENH1, is a member of the Enigma family of proteins. Proteins belonging to this family contain an N-terminal PDZ (post-synaptic density-95/discs large/zone occludens-1) domain and one to three C-terminal LIM domains that typically associate with various isoforms of PKC (protein kinase C). Expressed in a wide variety of tissues, PDLIM5 contains three LIM zinc-binding domains and one PDZ domain. In the brain, PDLIM5 co-localizes with synaptic vesicles of neurotransmitters and regulates neuronal calcium signaling through an interaction with PKC ε and N-type Ca^{2+} CP α1B (N-type calcium channel α1B subunit). Expression of PDLIM5 is often increased in the brain of patients with schizophrenia, major depression and bipolar disorder. This suggests that PDLIM5 may contribute to the genetic susceptibility of such conditions.

REFERENCES

1. Kuroda, S., et al. 1996. Protein-protein interaction of zinc finger LIM domains with protein kinase C. J. Biol. Chem. 271: 31029-31032.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605904. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Wu, M., et al. 2004. Cloning and identification of a novel human gene PDLIM5, a homolog of AD-associated neuronal thread protein (AD7c-NTP). DNA Seq. 15: 144-147.
4. Kato, T., et al. 2005. Gene expression and association analyses of LIM (PDLIM5) in bipolar disorder and schizophrenia. Mol. Psychiatry 10: 1045-1055.
5. Iga, J., et al. 2006. Gene expression and association analysis of LIM (PDLIM5) in major depression. Neurosci. Lett. 400: 203-207.
6. Horiuchi, Y., et al. 2006. A polymorphism in the PDLIM5 gene associated with gene expression and schizophrenia. Biol. Psychiatry 59: 434-439.
7. Numata, S., et al. 2007. Gene expression in the peripheral leukocytes and association analysis of PDLIM5 gene in schizophrenia. Neurosci. Lett. 415: 28-33.
8. Liu, Z., et al. 2008. A major single nucleotide polymorphism of the PDLIM5 gene associated with recurrent major depressive disorder. J. Psychiatry Neurosci. 33: 43-46.

CHROMOSOMAL LOCATION

Genetic locus: PDLIM5 (human) mapping to 4q22.3.

SOURCE

PDLIM5 (JK-3R) is a mouse monoclonal antibody raised against recombinant PDLIM5 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

PDLIM5 (JK-3R) is recommended for detection of PDLIM5 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PDLIM5 siRNA (h): sc-76097, PDLIM5 shRNA Plasmid (h): sc-76097-SH and PDLIM5 shRNA (h) Lentiviral Particles: sc-76097-V.

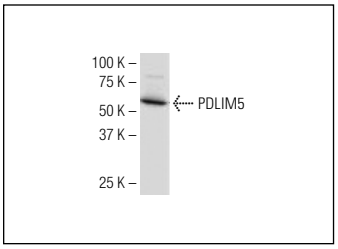
Molecular Weight of PDLIM5: 64 kDa.

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

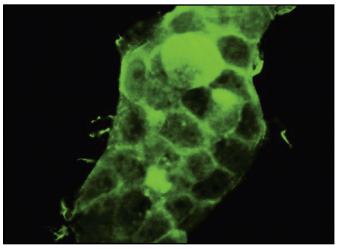
RECOMMENDED SUPPORT REAGENTS

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). 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



PDLIM5 (JK-3R): sc-81813. Western blot analysis of PDLIM5 expression in A-431 whole cell lysate.



PDLIM5 (JK-3R): sc-81813. Immunofluorescence staining of paraformaldehyde-fixed A-431 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Leung, M.C., et al. 2013. Z-band alternatively spliced PDZ motif protein (ZASP) is the major O-linked β-N-acetylglucosamine-substituted protein in human heart myofibrils. J. Biol. Chem. 288: 4891-4898.
2. Ajeian, J.N., et al. 2016. Proteomic analysis of integrin-associated complexes from mesenchymal stem cells. Proteomics Clin. Appl. 10: 51-57.

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.