SANTA CRUZ BIOTECHNOLOGY, INC.

DLG5 (A-11): sc-374594

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Membrane-associated guanylate kinase (MAGUK) family members function as molecular scaffolds for the assembly of multiprotein complexes localizing to the plasma membrane. Several mammalian proteins related to the *Drosophila* tumor suppressor discs-large (dlg) gene product belong to the MAGUK family. MAGUK family members include the postsynaptic proteins PSD-93, DLG5, Pals1, PSD-95 (SAP 90), densin-180, NE-dlg (SAP 120), dlg-1 (SAP 97), GKAP (GK-associated protein), p55, the tight junction associated proteins ZO-1–3 and the caspase-associated recruitment domain (CARD) proteins CARD6, CARD8-12 and CARD14. DLG5, a cell-cell junction peripheral membrane protein, plays an important role in maintaining the structure of epithelial cell plasma membranes. It also plays an important part in transmitting extracellular signals to the cytoskeleton and the membrane. DLG5 which can interact with MPP1 and CTNNB1, is primarily expressed in prostate and placenta.

REFERENCES

1. Nakamura, H., et al. 1998. Identification of a novel human homolog of the *Drosophila* dlg, P-dlg, specifically expressed in the gland tissues and interacting with p55. FEBS Lett. 433: 63-67.
2. Shah, G., et al. 2002. The cloning, genomic organization and tissue expression profile of the human DLG5 gene. BMC Genomics 3: 6.
3. Wakabayashi, M., et al. 2003. Interaction of lp-dlg/KIAA0583, a membrane-associated guanylate kinase family protein, with vinexin and β-catenin at sites of cell-cell contact. J. Biol. Chem. 278: 21709-21714.
4. Stoll, M., et al. 2004. Genetic variation in DLG5 is associated with inflammatory bowel disease. Nat. Genet. 36: 476-480.
5. Yamazaki, K., et al. 2004. Association analysis of SLC22A4, SLC22A5 and DLG5 in Japanese patients with Crohn disease. J. Hum. Genet. 49: 664-668.
6. Noble, C.L., et al. 2005. DLG5 variants do not influence susceptibility to inflammatory bowel disease in the Scottish population. Gut 54: 1416-1420.
7. Daly, M.J., et al. 2005. Association of DLG5 R30Q variant with inflammatory bowel disease. Eur. J. Hum. Genet. 13: 835-839.
8. Taniuchi, K., et al. 2005. Down-regulation of RAB6KIFL/KIF20A, a kinesin involved with membrane trafficking of discs large homologue 5, can attenuate growth of pancreatic cancer cell. Cancer Res. 65: 105-112.

CHROMOSOMAL LOCATION

Genetic locus: DLG5 (human) mapping to 10q22.3; Dlg5 (mouse) mapping to 14 A3.

SOURCE

DLG5 (A-11) is a mouse monoclonal antibody raised against amino acids 355-654 mapping within an internal region of DLG5 of human 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.

APPLICATIONS

DLG5 (A-11) is recommended for detection of DLG5 isoforms 1, 2 and 4 of mouse, rat and human 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 DLG5 siRNA (h): sc-60541, DLG5 siRNA (m): sc-60542, DLG5 shRNA Plasmid (h): sc-60541-SH, DLG5 shRNA Plasmid (m): sc-60542-SH, DLG5 shRNA (h) Lentiviral Particles: sc-60541-V and DLG5 shRNA (m) Lentiviral Particles: sc-60542-V.

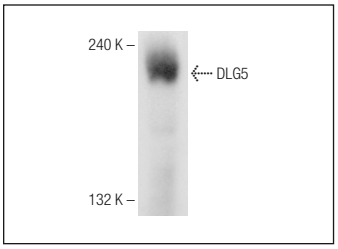
Molecular Weight of DLG5: 200 kDa.

Positive Controls: human placenta extract: sc-363772 or JAR cell lysate: sc-2276.

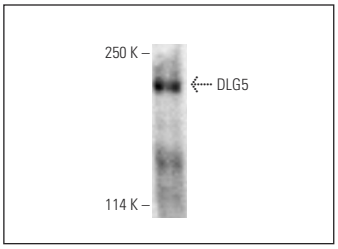
RECOMMENDED SUPPORT REAGENTS

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



DLG5 (A-11): sc-374594. Western blot analysis of DLG5 expression in human placenta tissue extract.



DLG5 (A-11): sc-374594. Western blot analysis of DLG5 expression in JAR whole cell lysate.

SELECT PRODUCT CITATIONS

1. Fearnley, G.W., et al. 2019. The homophilic receptor PTPRK selectively dephosphorylates multiple junctional regulators to promote cell-cell adhesion. Elife 8: e44597.

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.