

PLEKHG5 (E-14): sc-165253

BACKGROUND

PLEKHG5 (Pleckstrin homology domain-containing family G member 5), also known as GEF720 (Guanine nucleotide exchange factor 720) or DSMA4, is predominantly expressed in the peripheral nervous system and brain. PLEKHG5 localizes to the cytoplasm, however when cells are stimulated, PLEKHG5 is found near the perinuclear regions. PLEKHG5 contains the highly conserved DH-PH module which is considered to be the signature motif of the Dbl family of guanine nucleotide exchange factors (GEFs). PLEKHG5 activates the NF κ B signaling pathway and may be involved in the control of neuronal cell differentiation. It has been suggested that mutations in the PLEKHG5 gene may lead to autosomal recessive distal spinal muscular atrophy (DSMA). Four isoforms of PLEKHG5 exists due to alternative splicing events.

REFERENCES

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- Fuentes, E.J., et al. 2003. Critical role of the pleckstrin homology domain in Dbs signaling and growth regulation. *J. Biol. Chem.* 278: 21188-21196.
- Joseph, R.E. and Norris, F.A. 2005. Substrate specificity and recognition is conferred by the pleckstrin homology domain of the Dbl family guanine nucleotide exchange factor P-Rex2. *J. Biol. Chem.* 280: 27508-27512.
- Baumeister, M.A., et al. 2006. The Dbs PH domain contributes independently to membrane targeting and regulation of guanine nucleotide-exchange activity. *Biochem. J.* 400: 563-572.
- Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611101. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Maystadt, I., et al. 2007. The nuclear factor κ B-activator gene PLEKHG5 is mutated in a form of autosomal recessive lower motor neuron disease with childhood onset. *Am. J. Hum. Genet.* 81: 67-76.

CHROMOSOMAL LOCATION

Genetic locus: PLEKHG5 (human) mapping to 1p36.31; Plekhg5 (mouse) mapping to 4 E2.

SOURCE

PLEKHG5 (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PLEKHG5 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-165253 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

PLEKHG5 (E-14) is recommended for detection of PLEKHG5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other PLEKHG family members.

Suitable for use as control antibody for PLEKHG5 siRNA (h): sc-88767, PLEKHG5 siRNA (m): sc-152314, PLEKHG5 shRNA Plasmid (h): sc-88767-SH, PLEKHG5 shRNA Plasmid (m): sc-152314-SH, PLEKHG5 shRNA (h) Lentiviral Particles: sc-88767-V and PLEKHG5 shRNA (m) Lentiviral Particles: sc-152314-V.

Molecular Weight (predicted) of PLEKHG5: 117 kDa.

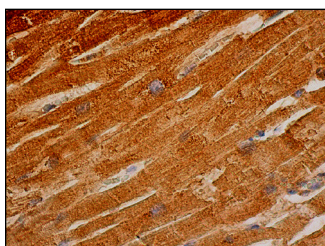
Molecular Weight (observed) of PLEKHG5: 102 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, MCF7 whole cell lysate: sc-2206 or NTERA-2 cl.D1 whole cell lysate: sc-364181.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



PLEKHG5 (E-14): sc-165253. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.