

PIEZO1 (N-15): sc-164319

BACKGROUND

PIEZO1, also designated membrane protein induced by β -amyloid treatment (Mib), is a 2,036 amino acid protein that is expressed in brain and may play a role in Alzheimer's disease. The encoding PIEZO1 maps to human chromosome 16, which encodes over 900 genes in approximately 90 million base pairs, makes up nearly 3% of human cellular DNA and is associated with a variety of genetic disorders. The rare disorder Rubinstein-Taybi syndrome is associated with chromosome 16, as is Crohn's disease, a gastrointestinal inflammatory condition that may involve the NOD2 gene. An association with systemic lupus erythematosus and a number of other autoimmune disorders with the pericentromeric region of chromosome 16 has led to the identification of SLC5A11 as a potential autoimmune modifier.

REFERENCES

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4. Satoh, K., et al. 2006. A novel membrane protein, encoded by the gene covering KIAA0233, is transcriptionally induced in senile plaque-associated astrocytes. *Brain Res.* 1108: 19-27.
5. Carneiro, L.A., et al. 2007. Nod-like receptors in innate immunity and inflammatory diseases. *Ann. Med.* 39: 581-593.
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7. King, K., et al. 2007. Identification, evolution, and association study of a novel promoter and first exon of the human NOD2 (CARD15) gene. *Genomics* 90: 493-501.
8. Gervasini, C., et al. 2007. High frequency of mosaic CREBBP deletions in Rubinstein-Taybi syndrome patients and mapping of somatic and germ-line breakpoints. *Genomics* 90: 567-573.
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CHROMOSOMAL LOCATION

Genetic locus: PIEZO1 (human) mapping to 16q24.3.

SOURCE

PIEZO1 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of PIEZO1 of human origin.

STORAGE

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

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-164319 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PIEZO1 (N-15) is recommended for detection of PIEZO1 of human and rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PIEZO1 (N-15) is also recommended for detection of PIEZO1 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for PIEZO1 siRNA (h): sc-93227, PIEZO1 siRNA (r): sc-270342, PIEZO1 shRNA Plasmid (h): sc-93227-SH, PIEZO1 shRNA Plasmid (r): sc-270342-SH, PIEZO1 shRNA (h) Lentiviral Particles: sc-93227-V and PIEZO1 shRNA (r) Lentiviral Particles: sc-270342-V.

Molecular Weight of PIEZO1: 233 kDa.

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.

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.