

Junctophilin-1 (N-15): sc-51308

BACKGROUND

Junctophilins are components of the junctional complexes between plasma membranes and endoplasmic or sarcoplasmic reticulum present in all excitable cells. Junctophilins contain a cytoplasmic domain which binds to the plasma membrane, as well as an ER/SR membrane spanning hydrophobic C-terminal segment. The three subtypes in this family are Junctophilin-1, -2 and -3. Junctophilin-1 is predominantly expressed in skeletal muscle, but is also expressed at low levels in heart. Junctophilin-2 is expressed in heart and skeletal muscle. Mutant mice lacking the Jph2 gene exhibit embryonic lethality and possess cardiac myocytes that express abnormal calcium transients. Junctophilin-3 is expressed in brain. The JPH3 alternatively spliced exon 2A has been suggested as a site for CTG repeat expansion leading to a Huntington disease-like autosomal dominant disorder.

REFERENCES

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4. Komazaki, S., et al. 2002. Deficiency of triad formation in developing skeletal muscle cells lacking junctophilin type 1. *FEBS Lett.* 524: 225-229.
5. Komazaki, S., et al. 2003. Abnormal junctional membrane structures in cardiac myocytes expressing ectopic junctophilin type 1. *FEBS Lett.* 542: 69-73.
6. Moriguchi, S., et al. 2006. Functional uncoupling between Ca²⁺ release and afterhyperpolarization in mutant hippocampal neurons lacking junctophilins. *Proc. Natl. Acad. Sci. USA* 103: 10811-10816.
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CHROMOSOMAL LOCATION

Genetic locus: JPH1 (human) mapping to 8q21.11; Jph1 (mouse) mapping to 1 A3.

SOURCE

Junctophilin-1 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Junctophilin-1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-51308 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Junctophilin-1 (N-15) is recommended for detection of Junctophilin-1 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)], 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).

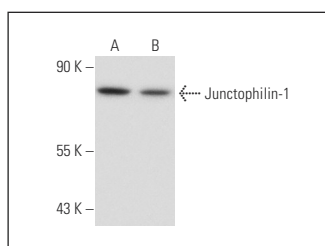
Junctophilin-1 (N-15) is also recommended for detection of Junctophilin-1 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for Junctophilin-1 siRNA (h): sc-72005, Junctophilin-1 siRNA (m): sc-72006, Junctophilin-1 shRNA Plasmid (h): sc-72005-SH, Junctophilin-1 shRNA Plasmid (m): sc-72006-SH, Junctophilin-1 shRNA (h) Lentiviral Particles: sc-72005-V and Junctophilin-1 shRNA (m) Lentiviral Particles: sc-72006-V.

Molecular Weight of Junctophilin-1: 72 kDa.

Positive Controls: Sol8 cell lysate: sc-2249 or C2C12 whole cell lysate: sc-364188.

DATA



Junctophilin-1 (N-15): sc-51308. Western blot analysis of Junctophilin-1 expression in C2C12 (A) and Sol8 (B) whole cell lysates.

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.

PROTOCOLS

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



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Try **Junctophilin-1 (2E6): sc-517084**, our highly recommended monoclonal alternative to Junctophilin-1 (N-15).