

JPH2 Antibody

JPH2 (CT): Junctophilin 2, JP2, JP-2

CATALOG No.: 4919

BACKGROUND:

Junctional complexes between the plasma membrane (PM) and endoplasmic/sarcoplasmic reticulum (ER/SR) are a common feature of all excitable cell types and mediate cross talk between cell surface and intracellular ion channels. Junctophilins (JPs) are important components of the junctional complexes. JPs are composed of a carboxy-terminal hydrophobic segment spanning the ER/SR membrane and a remaining cytoplasmic domain that shows specific affinity for the PM (1). Four JPs have been identified as tissue-specific subtypes derived from different genes: JPH1 is expressed in skeletal muscle, JPH2 is detected throughout all muscle cell types, and JPH3 and JPH4 are predominantly expressed in the brain and contribute to the subsurface cistern formation in neurons (1-3). JPH2-null mice died of embryonic cardiac arrest and human patients with mutations in the JPH2 gene showed hypertrophic cardiomyopathy, demonstrating the importance of this protein (4,5). Multiple isoforms of JPH2 are known to exist.

SOURCE:

Rabbit polyclonal JPH2 antibody was raised against a 14 amino acid peptide near the carboxy terminus of human JPH2 (GenBank accession no. NP_065166).

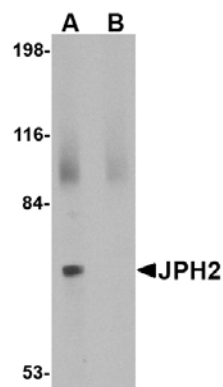
APPLICATION:

JPH2 antibody can be used for detection of JPH2 by Western blot at 1 – 2 µg/ml. (Optimal dilution should be determined by user.) 293 cell lysate can be used as positive control. JPH2 antibody is human, mouse and rat reactive.

For research use only.

STORAGE:

JPH2 antibody is supplied as immunoaffinity purified IgG in PBS containing 0.02% sodium azide. Store at 4°C, stable for one year.



Western blot analysis of JPH2 in 293 cell lysate with JPH2 antibody at 2 µg/ml in (A) the absence and (B) the presence of blocking peptide.

RELATED PRODUCTS:

Blocking Peptide, Catalog No. **4919P**.

293 Cell Lysate, Catalog No. **1210**.

JPH2 Antibody (CT2), Catalog No. **4929**.

JPH1 Antibody, Catalog No. **4917**.

JPH3 Antibody (CT), Catalog No. **4921**.

JPH4 Antibody (CT), Catalog No. **4923**.

REFERENCES:

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2. Kakizawa S, Kishimoto Y, Hashimoto K, et al. Junctophilin-mediated channel crosstalk essential for cerebellar synaptic plasticity. *EMBO J.* 2007; 26:1924-33.
3. Nishi M, Sakagami H, Komazaki S, et al. Coexpression of junctophilin type 3 and type 4 in brain. *Brain Res. Mol. Brain Res.* 2003; 118:102-10.
4. Matsushita Y, Furukawa T, Kasanuki H, et al. Mutation of junctophilin type 2 associated with hypertrophic cardiomyopathy. *J. Hum. Genet.* 2007; 52:543-8.
5. Landstrom AP, Weisleder N, Bataalden KB, et al. Mutations in JPH2-encoded junctophilin-2 associated with hypertrophic cardiomyopathy in humans. *J. Mol. Cell Cardiol.* 2007; 42:1026-35.

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