

## JPH1 Antibody

*JPH1: Junctophilin 1, JP1, JP-1*

**CATALOG No.: 4917**

### 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). JPH1 is essential for stabilizing the T-tubule and SR membranes to form junctions and provide an environment for the assembly of receptors such as the ryanodine receptor type 1 (RyR1) (4).

### SOURCE:

Rabbit polyclonal JPH1 antibody was raised against a 15 amino acid peptide near the carboxy terminus of human JPH1 (GenBank accession no. AAI39833).

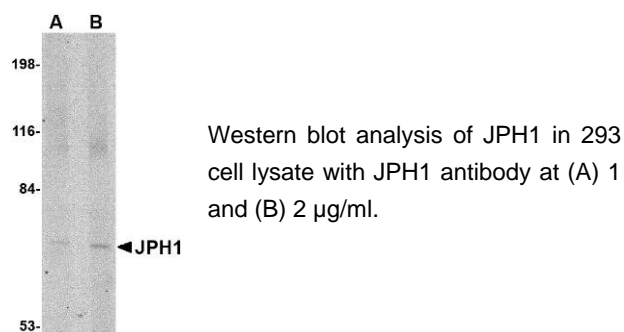
### APPLICATION:

JPH1 antibody can be used for detection of JPH1 by Western blot at 1 – 2 µg/ml. (Optimal dilution should be determined by user.) 293 cell lysate can be used as positive control. JPH1 antibody is human, mouse and rat reactive.

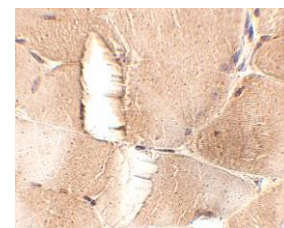
**For research use only.**

### STORAGE:

JPH1 antibody is supplied as immunoaffinity purified IgG in PBS containing 0.02% sodium azide. Store at 4°C, stable for one year.



Immunohistochemistry of JPH1 in mouse skeletal muscle tissue with JPH1 antibody at 2.5 µg/ml.



### RELATED PRODUCTS:

Blocking Peptide, Catalog No. **4917P**.

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

JPH2 Antibody (CT), Catalog No. **4919**.

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

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

### REFERENCES:

1. Takeshima H, Komazaki S, Nishi M, et al. Junctophilins: a novel family of junctional membrane complex proteins. *Mol. Cell.* 2000; 6:11-22.
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. Phimister AJ, Lango J, Lee EH, et al. Conformation-dependent stability of Junctophilin 1 (JP1) and Ryanodine Receptor type 1 (RyR1) channel complex is mediated by their hyper-reactive thiols. *J. Biol. Chem.* 2007; 282:8867-77. (09-01D)