

**JPH1 Antibody**  
**Catalog # ASC10804****Specification**

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**JPH1 Antibody - Product Information**

Application	WB, IHC-P, E
Primary Accession	<a href="#">Q9HDC5</a>
Other Accession	<a href="#">AAI39833</a> , <a href="#">145337941</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Application Notes	JPH1 antibody can be used for detection of JPH1 by Western blot at 1 - 2 µg/mL. Antibody can also be used for immunohistochemistry starting at 2.5 µg/mL.

**JPH1 Antibody - Additional Information**

Gene ID	56704
Target/Specificity	
JPH1;	

**Reconstitution & Storage**

JPH1 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

**Precautions**

JPH1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**JPH1 Antibody - Protein Information**

**Name** JPH1

**Synonyms** JP1

**Function**

Junctophilins contribute to the formation of junctional membrane complexes (JMCs) which link the plasma membrane with the endoplasmic or sarcoplasmic reticulum in excitable cells. Provides a structural foundation for functional cross-talk between the cell surface and intracellular calcium release channels. JPH1 contributes to the construction of the skeletal muscle triad by linking the t-tubule (transverse-tubule) and SR (sarcoplasmic reticulum) membranes.

**Cellular Location**

Cell membrane; Peripheral membrane protein. Endoplasmic reticulum membrane; Single-pass type IV membrane protein. Sarcoplasmic reticulum membrane; Single-pass type IV membrane

protein. Note=Localized predominantly on the plasma membrane. The transmembrane domain is anchored in endoplasmic/sarcoplasmic reticulum membrane, while the N-terminal part associates with the plasma membrane. In skeletal muscle cells, it is predominantly localized at the junction of the A and I bands (By similarity).

#### **Tissue Location**

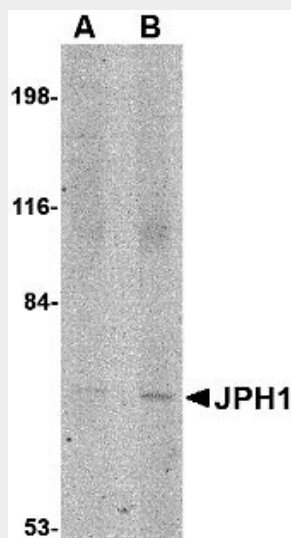
Abundantly expressed in skeletal muscle. Very low levels in heart.

#### **JPH1 Antibody - Protocols**

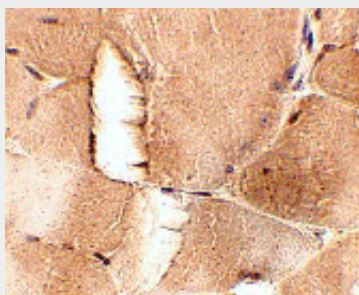
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### **JPH1 Antibody - Images**



Western blot analysis of JPH1 in 293 cell lysate with JPH1 antibody at (A) 1 and (B) 2  $\mu$ g/mL.



Immunohistochemistry of JPH1 in mouse skeletal muscle tissue with JPH1 antibody at 2.5  $\mu$ g/mL.

#### **JPH1 Antibody - Background**

**JPH1 Antibody:** 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. 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. 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).

### **JPH1 Antibody - References**

Takeshima H, Komazaki S, Nishi M, et al. Junctophilins: a novel family of junctional membrane complex proteins. *Mol. Cell.*2000; 6:11-22.  
Kakizawa S, Kishimoto Y, Hashimoto K, et al. Junctophilin-mediated channel crosstalk essential for cerebellar synaptic plasticity. *EMBO J.*2007; 26:1924-33.  
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.  
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.