

JPH1 Antibody

Catalog # ASC10804

Product Information

Application	WB, E, IHC-P
Primary Accession	Q9HDC5
Other Accession	AAI39833 , 145337941
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	71686
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	JPH1 antibody can be used for detection of JPH1 by Western blot at 1 - 2 μ g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 μ g/mL.

Additional Information

Gene ID	56704
Other Names	Junctophilin-1, JP-1, Junctophilin type 1, JPH1, JP1
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.

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.

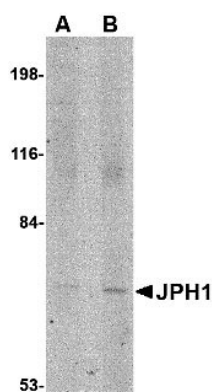
Background

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).

References

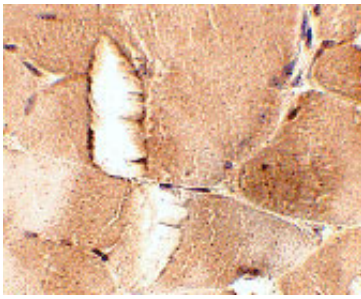
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Kakizawa S, Kishimoto Y, Hashimoto K, et al. Junctophilin-mediated channel crosstalk essential for cerebellar synaptic plasticity. *EMBO J.*2007; 26:1924-33.
Nishi M, Sakagami H, Komazaki S, et al. Coexpression of junctophilin type 3 and type 4 in 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.

Images



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

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



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