

JPH2 Antibody

Catalog # ASC10809

Product Information

Application	WB, E, IHC-P
Primary Accession	Q96JJ6
Other Accession	NP_065166 , 21704281
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	65861
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	JPH2 antibody can be used for detection of JPH2 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	84502
Other Names	Junctophilin-4, JP-4, Junctophilin-like 1 protein, JPH4, JPHL1, KIAA1831
Target/Specificity	JPH4;
Reconstitution & Storage	JPH2 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	JPH2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	JPH4
Synonyms	JPHL1, KIAA1831
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. JPH4 is brain- specific and appears to have an active role in certain neurons involved in motor coordination and memory (By similarity).
Cellular Location	Cell membrane; Peripheral membrane protein. Endoplasmic reticulum

membrane; Single-pass type IV membrane protein. Note=Localized predominantly on the plasma membrane. The transmembrane domain is anchored in endoplasmic reticulum membrane, while the N-terminal part associates with the plasma membrane (By similarity).

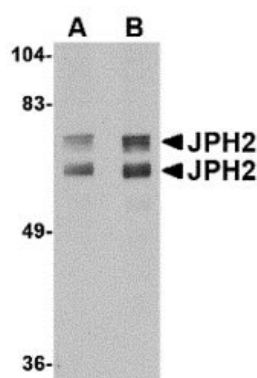
Background

JPH2 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. 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. Multiple isoforms of JPH2 are known to exist.

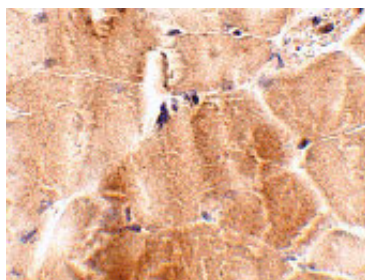
References

- 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.
- Matsushita Y, Furukawa T, Kasanuki H, et al. Mutation of junctophilin type 2 associated with hypertrophic cardiomyopathy. *J. Hum. Genet.*2007; 52:543-8.

Images



Western blot analysis of JPH2 in mouse brain tissue lysate with JPH2 antibody at (A) 1 and (B) 2 μ g/mL.



Immunohistochemistry of JPH2 in mouse skeletal muscle tissue with JPH2 antibody at 2.5 μ g/mL.