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JPH3 Antibody
Catalog # ASC10810

Specification

JPH3 Antibody - Product Information

Application	**WB, IHC, IF**
Primary Accession	Q8WXH2
Other Accession	NP_065706, 21704283
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Application Notes	**JPH3 antibody can be used for detection of JPH3 by Western blot at 1 µg/mL. Antibody can also be used for immunohistochemistry starting at 2.5 µg/mL. For immunofluorescence start at 20 µg/mL.**

JPH3 Antibody - Additional Information

Gene ID	**57338**

Target/Specificity
JPH3;

Reconstitution & Storage
JPH3 antibody can be stored at 4℃ for three months and -20℃, 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
JPH3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

JPH3 Antibody - Protein Information

Name JPH3

Synonyms JP3, TNRC22

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. JPH3 is brain- specific and appears to have an active role in certain neurons involved in motor coordination and memory.

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).

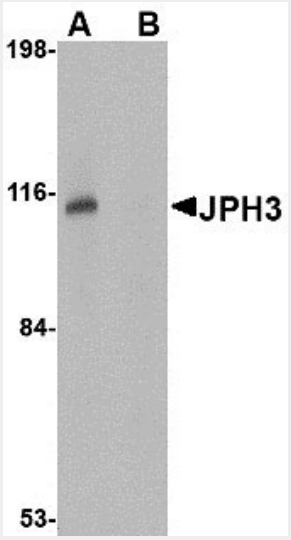
Tissue Location
Specifically expressed in brain.

JPH3 Antibody - Protocols

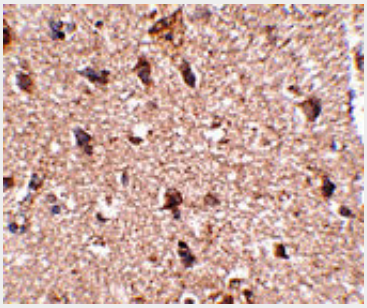
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

JPH3 Antibody - Images

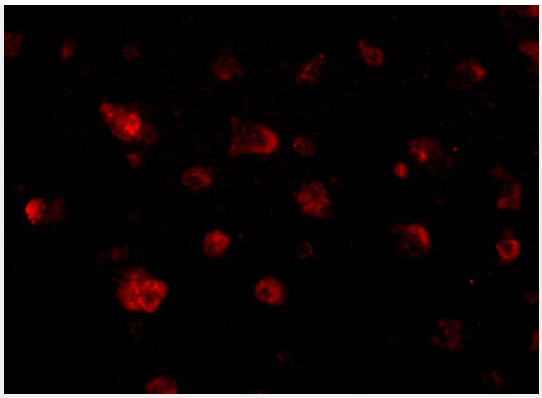


Western blot analysis of JPH3 in Daudi cell lysate with JPH3 antibody at 1 µg/mL in (A) the absence and (B) the presence of blocking peptide.



Immunohistochemistry of JPH3 in human brain tissue with JPH3 antibody at 2.5 µg/mL.

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Immunofluorescence of JPH3 in human brain tissue with JPH3 antibody at 20 µg/mL.

JPH3 Antibody - Background

JPH3 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. In the CNS, both JPH3 and JPH4 are expressed throughout neural sites and contribute to the subsurface cistern formation in neurons. Mice lacking both JPH3 and JPH4 subtypes exhibit serious symptoms such as impaired learning and memory and are accompanied by abnormal nervous functions. A repeat expansion in JPH3 is associated with Huntington disease-like 2. At least two isoforms of JPH3 are known to exist.

JPH3 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.
Moriguchi S, Nishi M, Komazaki S, et al. Functional uncoupling between Ca2+ release and afterhyperpolarization in mutant hippocampal neurons lacking junctophilins. Proc. Natl. Acad. Sci.2006; 103:10811-6.