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PANX1 Antibody

Catalog # ASC11574

Product Information

Application	WB, IF, E
Primary Accession	Q96RD7
Other Accession	NP_056183, 39995064
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	48050
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	PANX1 antibody can be used for detection of PANX1 by Western blot at 1 - 2 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	24145
Other Names	Pannexin-1, PANX1, MRS1
Target/Specificity	PANX1; Two transcript variants encoding different isoforms have been found for this gene.
Reconstitution & Storage	PANX1 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	PANX1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PANX1 (HGNC:8599)
Function	Ion channel involved in a variety of physiological functions such as blood pressure regulation, apoptotic cell clearance and oogenesis (PubMed:15304325, PubMed:16908669, PubMed:20829356, PubMed:20944749, PubMed:30918116). Forms anion-selective channels with relatively low conductance and an order of permeabilities: nitrate>iodide>chlroride>>aspartate=glutamate=gluconate (By similarity). Can release ATP upon activation through phosphorylation or cleavage at C-terminus (PubMed:32238926). May play a role as a Ca(2+)- leak channel to regulate ER Ca(2+) homeostasis (PubMed:16908669).

Cellular Location	Cell membrane; Multi-pass membrane protein {ECO:0000255|PROSITE-ProRule:PRU00351}. Endoplasmic reticulum membrane; Multi-pass membrane protein {ECO:0000255|PROSITE-ProRule:PRU00351}
Tissue Location	Widely expressed (PubMed:30918116). Highest expression is observed in oocytes and brain (PubMed:30918116). Detected at very low levels in sperm cells (PubMed:30918116)

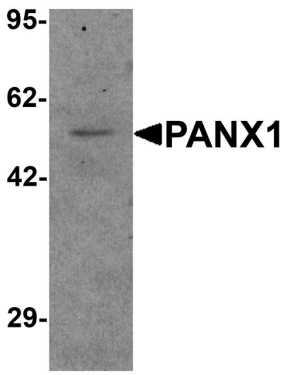
Background

PANX1 Antibody: The pannexin gene family encodes a second class of putative gap junction proteins and are highly conserved in invertebrates and mammals. Pannexins (Panx) are four-pass transmembrane proteins that oligomerize to form large pore ion and metabolite-permeable channels. Pannexin-1 (PANX1) and Pannexin-3 are closely related, while Pannexin-2 is a more distant relation. PANX1 is a transmembrane protein that forms a mechanosensitive ATP-permeable channel between adjacent cells and in the endoplasmic reticulum. PANX1 may play a role as a Ca2+ -leak channel to regulate ER Ca2+ homeostasis and regulates neural stem and progenitor cell proliferation.

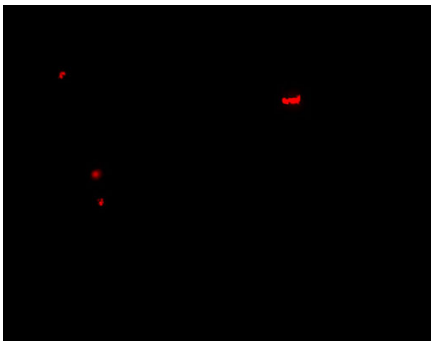
References

Barbe MT, Monyer H and Bruzzone R. Cell-cell communication beyond connexins: the pannexin channels. Physiology 2006; 21:103-14.
Baranova A, Ivanov D, Petrash N, et al. The mammalian pannexin family is homologous to the invertebrate innexin gap junction proteins. Genomics 2004; 83:706-16.
Sohl G, Maxeiner S and Willecke K. Expression and functions of neuronal gap junctions. Nat. Rev. Neurosci. 2005; 6:191-200
Bao L, Locovei S and Dahl G. Pannexin membrane channels are mechanosensitive conduits for ATP. FEBS Lett. 2004; 572:65-8.

Images



Western blot analysis of PANX1 in human ovary tissue lysate with PANX1 antibody at 1 µg/mL.



Immunofluorescence of PANX1 in human ovary tissue with PANX1 antibody at 20 µg/mL.