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Product datasheet for TA328644

Pannexin 1 (PANX1) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3000
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)KEPTEPKFKGLRLE, corresponding to amino acid residues 18- 31 of human Pannexin 1 . Intracellular, N-terminus.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.05% NaN3.
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	pannexin 1
Database Link:	NP_056183 Entrez Gene 55991 MouseEntrez Gene 315435 RatEntrez Gene 24145 Human Q96RD7

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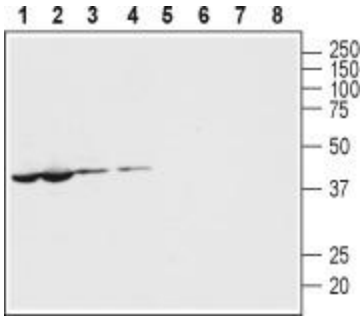
Background: Gap junctions are usually found in clusters and enable intercellular communication by allowing the passage of small molecules between cells. They play important roles in different biological processes. These include differentiation, cell cycle synchronization, cellular development, neuronal activity and the immune response. Proteins involved in gap junction formation are composed of four transmembrane domains, 2 extracellular loops and one intracellular loop and intracellular N- and C-termini. Several consensus cysteine residues are in the extracellular loop and are essential and necessary for intercellular docking of gap junction hemichannels in the opposing cell membrane. Pannexins (Pannexin 1, Pannexin 2 and Pannexin 3) belong to the superfamily of gap junction proteins. Pannexin 1 (PANX1) is ubiquitously expressed, Pannexin 2 (PANX2) is specifically expressed in the human brain and widespread in rodents and Pannexin 3 (PANX3) is also detected in the brain. The gating properties of Pannexins were studied in Xenopus oocytes and results demonstrate that only PANX1 is able to form homomeric hemichannels, and is also able to form heteromeric hemichannels with PANX2 but not with PANX3. Not surprising, PANX1 gating properties depend whether it forms homomeric or heteromeric hemichannels. A number of different stimuli are known to open these channels and include mechanical stress, extracellular ATP, increases in intracellular Ca2+ and inflammation. Possible roles for Pannexins include paracrine signaling in vascular endothelial cells and taste cell signaling.

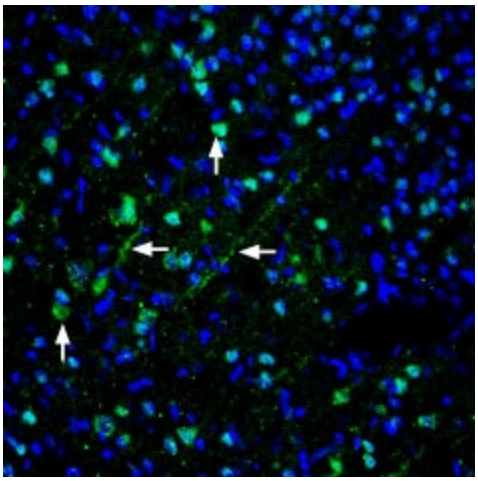
Synonyms: MRS1; PX1; UNQ2529

Protein Families: Transmembrane

Product images:



Western blot analysis of mouse (lanes 1 and 5) and rat (lanes 2 and 6) heart lysates and mouse (lanes 3 and 7) and rat (lanes 4 and 8) brain membranes: 1-4. Anti-Pannexin 1 antibody, (1:400). 5-8. Anti-Pannexin 1 antibody, preincubated with the control peptide antigen.



Expression of Pannexin 1 in rat cortex.Immunohistochemical staining of immersion-fixed, free floating rat brain frozen sections using Anti-Pannexin 1 antibody, (1:300). PANX1 staining (green) is apparent in cells with neuronal outline (vertical arrows) and apical dendrites (horizontal arrows) in the parietal cingulated cortex region. Cell nuclei are stained with DAPI (blue).