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PIEZO2 Antibody
Catalog # ASC12106

Specification

PIEZO2 Antibody - Product Information

Application	**WB, E**
Primary Accession	Q92508
Other Accession	NP_071351
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 233, 305 kDa** **Observed: 235 kDa KDa**

PIEZO2 Antibody - Additional Information

Gene ID	**63895**
Alias Symbol	**PIEZO2**

Other Names
PIEZO2 Antibody: C18orf30, C18orf58, DA3, DA5, DAIPT, FAM38B, FAM38B2, HsT748, HsT771, MWKS

Target/Specificity
PIEZO2 Antibody is predicted to not cross-react with PIEZO1.

Reconstitution & Storage
PIEZO2 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
PIEZO2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

PIEZO2 Antibody - Protein Information

Name PIEZO1 (HGNC:28993)

Synonyms FAM38A, KIAA0233

Function
Pore-forming subunit of the mechanosensitive non-specific cation Piezo channel required for rapidly adapting mechanically activated (MA) currents and has a key role in sensing touch and tactile pain (PubMed:23479567, PubMed:23695678, PubMed:25955826, PubMed:37590348). Piezo channels are homotrimeric three-blade propeller-shaped

structures that utilize a cap-motion and plug-and- latch mechanism to gate their ion-conducting pathways (PubMed:37590348). Generates currents characterized by a linear current-voltage relationship that are sensitive to ruthenium red and gadolinium (By similarity). Conductance to monovalent alkali ions is highest for K(+), intermediate for Na(+) and lowest for Li(+) (PubMed:25955826). Divalent ions except for Mn(2+) permeate the channel but more slowly than the monovalent ions and they also reduce K(+) currents (PubMed:25955826). Plays a key role in epithelial cell adhesion by maintaining integrin activation through R-Ras recruitment to the ER, most probably in its activated state, and subsequent stimulation of calpain signaling (PubMed:20016066). In inner ear hair cells, PIEZO1/2 subunits may constitute part of the mechanotransducer (MET) non-selective cation channel complex where they may act as pore- forming ion-conducting component in the complex (By similarity). In the kidney, may contribute to the detection of intraluminal pressure changes and to urine flow sensing (By similarity). Acts as a shear- stress sensor that promotes endothelial cell organization and alignment in the direction of blood flow through calpain activation (PubMed:25119035). Plays a key role in blood vessel formation and vascular structure in both development and adult physiology (By similarity). Acts as a sensor of phosphatidylserine (PS) flipping at the plasma membrane and governs morphogenesis of muscle cells (By similarity). In myoblasts, flippase-mediated PS enrichment at the inner leaflet of plasma membrane triggers channel activation and Ca2+ influx followed by Rho GTPases signal transduction, leading to assembly of cortical actomyosin fibers and myotube formation (PubMed:29799007).

Cellular Location
Endoplasmic reticulum membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:E2JF22}. Endoplasmic reticulum-Golgi intermediate compartment membrane {ECO:0000250|UniProtKB:Q0KL00}. Cell membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:E2JF22}. Cell projection, lamellipodium membrane Note=In erythrocytes, located in the plasma membrane (PubMed:22529292, PubMed:23479567). Accumulates at the leading apical lamellipodia of endothelial cells in response to shear stress (PubMed:25119035) Colocalizes with F-actin and MYH9 at the actomyosin cortex in myoblasts. {ECO:0000250|UniProtKB:E2JF22, ECO:0000269|PubMed:22529292, ECO:0000269|PubMed:23479567, ECO:0000269|PubMed:25119035}

Tissue Location
Expressed in numerous tissues. In normal brain, expressed exclusively in neurons, not in astrocytes. In Alzheimer disease brains, expressed in about half of the activated astrocytes located around classical senile plaques. In Parkinson disease substantia nigra, not detected in melanin-containing neurons nor in activated astrocytes. Expressed in erythrocytes (at protein level) Expressed in myoblasts (at protein level)

PIEZO2 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

PIEZO2 Antibody - Images

PIEZO2 Antibody - Background

PIEZO2 is a mechanically-activated ion channel that links mechanical forces to biological signals. The encoded protein contains thirty transmembrane domains and likely functions as part of mechanically-activated (MA) cation channels. These channels serve to connect mechanical forces to biological signals. The encoded protein quickly adapts MA currents in somatosensory neurons. Defects in this gene are a cause of type 5 distal arthrogryposis.