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# PIEZO2 Antibody

Catalog # ASC12106

## Product Information

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| **Application** | WB, E |
| **Primary Accession** | Q9H5I5 |
| **Other Accession** | NP_071351 |
| **Reactivity** | Human |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | IgG |
| **Clone Names** | PIEZO2 |
| **Calculated MW** | 318064 |

## Additional Information

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| **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. |

## Protein Information

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| **Name** | PIEZO2 ( HGNC:26270) |
| **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: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). Expressed in sensory neurons, is essential for diverse physiological processes, including respiratory control, systemic metabolism, urinary function, and proprioception (By similarity). Mediates airway stretch sensing, enabling efficient respiration at birth and maintaining normal breathing in adults (By similarity). It regulates brown and beige adipose tissue morphology and function, preventing systemic hypermetabolism (By similarity). In the lower urinary tract, acts as a sensor in |

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| | both the bladder urothelium and innervating sensory neurons being required for bladder-stretch sensing and urethral micturition reflexes, ensuring proper urinary function (PubMed:33057202). Additionally, PIEZO2 serves as the principal mechanotransducer in proprioceptors, facilitating proprioception and coordinated body movements (By similarity). 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). Required for Merkel-cell mechanotransduction (By similarity). Plays a major role in light-touch mechanosensation (By similarity). In kidney, during blood volume challenges, regulates calcium dynamics and maintains renin production, thereby serving as an essential regulator of the renin-angiotensin-aldosterone system (RAAS) and systemic blood volume control (By similarity). |
| **Cellular Location** | Cell membrane {ECO:0000250\|UniProtKB:Q8CD54}; Multi-pass membrane protein {ECO:0000250\|UniProtKB:Q8CD54} |

## 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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.