

Anti-FAM38A / PIEZO1 Antibody [PSH11-49]

HA723341



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Mouse
Applications:	WB, IF-Cell
Molecular Wt:	Predicted band size: 292 kDa
Clone number:	PSH11-49

Description: Piezo-type mechanosensitive ion channel component 1 is a protein that in humans is encoded by the PIEZO1 gene. PIEZO1 is a large mechanosensitive ion channel protein that forms a homotrimeric complex with a distinctive three-bladed, propeller-shaped architecture. Each subunit of PIEZO1 contains between 30 and 40 transmembrane domains. The protein consists of a central pore module and peripheral mechanotransduction modules. The pore module is composed of the last two transmembrane helices, an extracellular cap domain, and an intracellular C-terminal domain. PIEZO1 functions as a non-selective cation channel capable of conducting both monovalent and divalent cations, including Na⁺, K⁺, and Ca²⁺. The mechanosensitivity of PIEZO1 is a defining characteristic. It can be directly activated by membrane tension, with the peripheral blade and beam structures likely acting as mechanotransduction modules. Notably, PIEZO1 requires lower tension for activation compared to bacterial mechanosensitive channels. The protein exhibits voltage-dependent inactivation. PIEZO1 serves as a mechanotransducer in various cell types and tissues playing roles in processes such as vascular development, red blood cell volume regulation, and epithelial homeostasis.

Immunogen: Recombinant protein within mouse PIEZO1 aa 2,214-2,457.

Positive control: 293T transfected with mPiezo1 cell lysate.

Subcellular location: Endoplasmic reticulum membrane, Endoplasmic reticulum-Golgi intermediate compartment membrane, Cell membrane, Cell projection, lamellipodium membrane.

Database links: SwissProt: E2JF22 Mouse

Recommended Dilutions:

WB	1:2,000
IF-Cell	1:200

Storage Buffer: 1*PBS (pH7.4), 0.1% BSA, 40% Glycerol, 0.2% Proclean 950.

Storage Instruction: Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

Purity: Protein A affinity purified.

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Orders:0086-571-88062880

Technical:0086-571-89986345

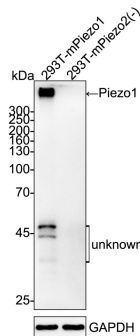
Service mail:support@huabio.cn

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Images

Fig1: Western blot analysis of FAM38A / PIEZO1 on different lysates with Rabbit anti-FAM38A / PIEZO1 antibody (HA723341) at 1/2,000 dilution.

Lane 1: 293T transfected with mPiezo1 cell lysate
Lane 2: 293T transfected with mPiezo2 cell lysate (negative)



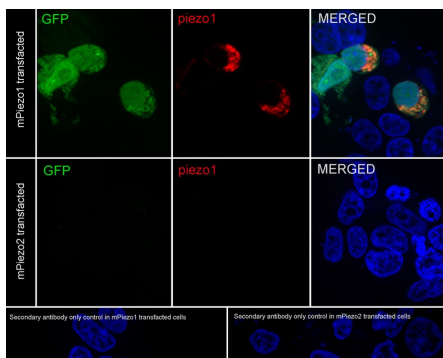
Lysates/proteins at 10 µg/Lane.

Exposure time: 2 minutes 50 seconds; ECL: K1802;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA723341) at 1/2,000 dilution was used in 5% NFDM/TBST at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

Fig2: Immunocytochemistry analysis of 293T cells labeling FAM38A / PIEZO1 with Rabbit anti-FAM38A / PIEZO1 antibody (HA723341) at 1/200 dilution.



293T cells, transfected with GFP-tagged mouse Piezo1 (top, positive) / tag-free mouse Piezo2 (bottom, negative) expression vector, respectively, were fixed in 4% paraformaldehyde for 15 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-FAM38A / PIEZO1 antibody (HA723341) at 1/200 dilution in 1% BSA in PBST overnight at 4 °C. Goat Anti-Rabbit IgG H&L (iFluor™ 594, HA1122) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Lai A et al. Mechanosensing by Piezo1 and its implications for physiology and various pathologies. *Biol Rev Camb Philos Soc.* 2022 Apr
2. Hu J et al. Microglial Piezo1 senses Abeta fibril stiffness to restrict Alzheimer's disease. *Neuron.* 2023 Jan

