

# Product Datasheet

## PIEZO1 Antibody (2-10) NBP2-75617

Unit Size: 100 ul

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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Updated 5/28/2024 v.20.1

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**NBP2-75617****PIEZO1 Antibody (2-10)**

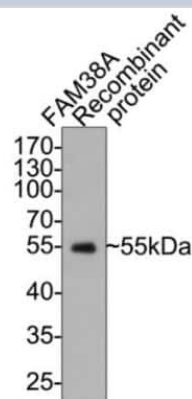
Product Information	
Unit Size	100 ul
Concentration	2 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	2-10
Preservative	0.05% Sodium Azide
Isotype	IgG2a
Purity	Protein A purified
Buffer	PBS (pH7.4), 0.2% BSA, 50% Glycerol
Target Molecular Weight	287 kDa

Product Description	
Host	Mouse
Gene Symbol	PIEZO1
Species	Human, Mouse, Rat, Porcine
Reactivity Notes	Porcine reactivity reported from a verified customer review. Mouse blocking reagent may be needed for IHC and ICC experiments to reduce high background signal. You can find these reagents under catalog numbers PK-2200-NB and MP-2400-NB. Please contact Technical Support if you have any. Please note that this antibody is reactive to Mouse and derived from the same host, Mouse. Mouse-On-questions.
Immunogen	Recombinant protein within Human PIEZO1 aa 1275-1540 / 2521. (SwissProt: Q92508 Human)

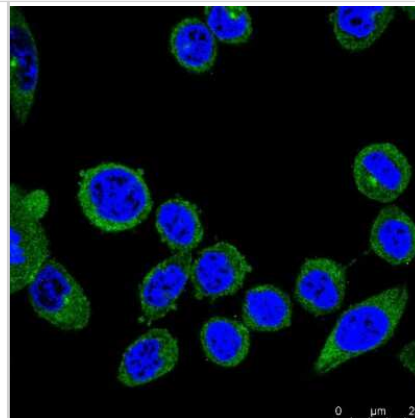
Product Application Details	
Applications	Western Blot, Electron Microscopy, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin
Recommended Dilutions	Western Blot 1:500-1:2000, Immunohistochemistry, Immunocytochemistry/ Immunofluorescence 1:100, Immunohistochemistry-Paraffin 1:200-1:600, Electron Microscopy
Application Notes	Use in EM reported in scientific literature (PMID:34489534). PIEZO1 antibody validated for WB from a verified customer review.

**Images**

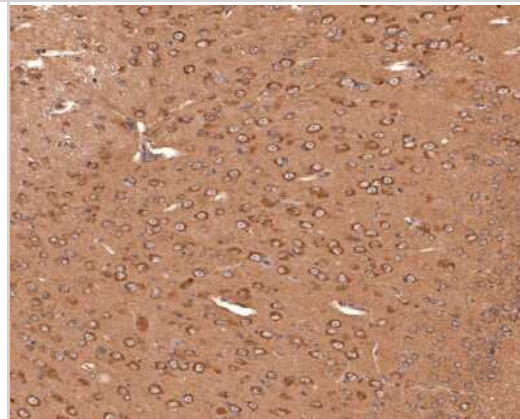
Western Blot: PIEZO1 Antibody (2-10) [NBP2-75617] - Analysis of FAM38A/PIEZO1 on recombinant protein with Mouse anti-FAM38A/PIEZO1 antibody at 1/500 dilution. Lysates/proteins at 50 ng/Lane. Exposure time: 1 minute; 10% SDS-PAGE gel. Proteins were transferred to a PVDF membrane and blocked with 5% NFDm/TBST for 1 hour at room temperature. The primary antibody at 1/500 dilution was used in 5% NFDm/TBST at room temperature for 2 hours. Goat Anti-Mouse IgG - HRP Secondary Antibody at 1:100,000 dilution was used for 1 hour at room temperature.



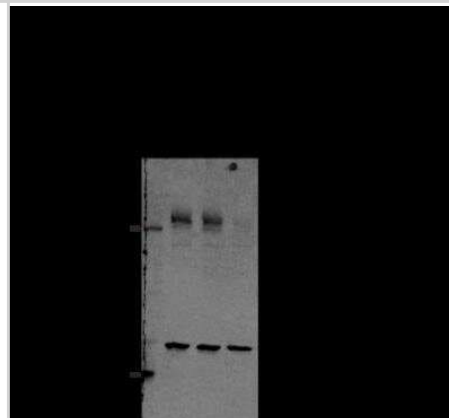
**Immunocytochemistry/Immunofluorescence: PIEZO1 Antibody (2-10) [NBP2-75617]** - Analysis of SiHa cells labeling FAM38A/PIEZO1 with Mouse anti-PIEZO1 antibody at 1/100 dilution. Cells were fixed in 4% paraformaldehyde for 30 minutes, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes, and then blocked with 2% BSA for 30 minutes at room temperature. Cells were then incubated with Mouse anti-PIEZO1 antibody at 1/100 dilution in 2% BSA overnight at 4 °C. Goat Anti-Mouse IgG H&L (iFluor(TM) 488) 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.



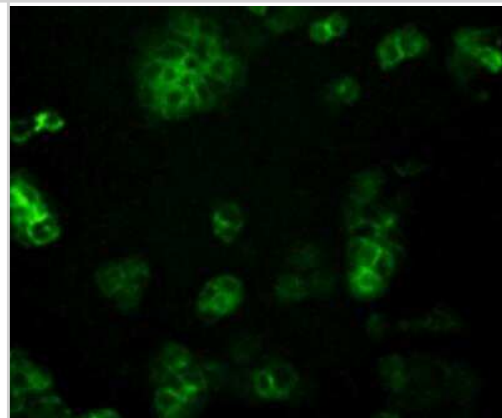
**Immunohistochemistry-Paraffin: PIEZO1 Antibody (2-10) [NBP2-75617]** - Analysis of paraffin-embedded mouse brain tissue with Mouse anti-FAM38A/PIEZO1 antibody at 1/200 dilution. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.



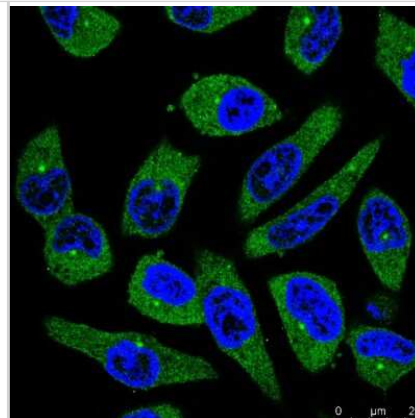
**Western Blot: PIEZO1 Antibody (2-10) [NBP2-75617]** - Porcine endocardial endothelium lysate. Control, mock transfected and Piezo1 siRNA transfected with alpha-actinin as loading control. WB image submitted by a verified customer review.



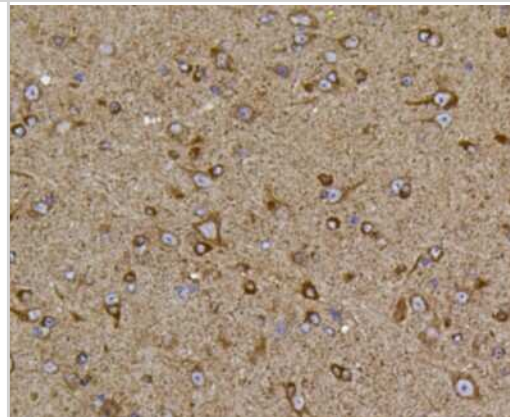
**Immunocytochemistry/Immunofluorescence: PIEZO1 Antibody (2-10) [NBP2-75617]** - ICC staining Protein PIEZO (green) in A431 cells. Cells were fixed in paraformaldehyde, permeabilized with 0.25% Triton X-100 in PBS.



**Immunocytochemistry/Immunofluorescence: PIEZO1 Antibody (2-10) [NBP2-75617]** - Analysis of Hela cells labeling FAM38A/PIEZO1 with Mouse anti-PIEZO1 antibody at 1/100 dilution. Cells were fixed in 4% paraformaldehyde for 30 minutes, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes, and then blocked with 2% BSA for 30 minutes at room temperature. Cells were then incubated with Mouse anti-FAM38A/PIEZO1 antibody at 1/100 dilution in 2% BSA overnight at 4 °C. Goat Anti-Mouse IgG H&L (iFluor(TM) 488) 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.



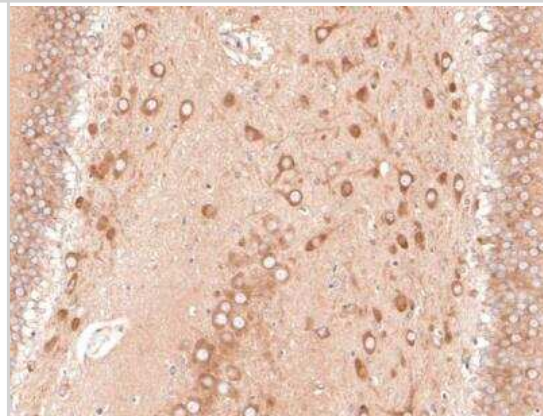
**Immunohistochemistry-Paraffin: PIEZO1 Antibody (2-10) [NBP2-75617]** - Analysis of paraffin-embedded mouse brain tissue using anti-Protein FAM38A antibody. Counter stained with hematoxylin.



**Immunohistochemistry-Paraffin: PIEZO1 Antibody (2-10) [NBP2-75617]** - Rat brain tissue with Mouse anti-FAM38A/PIEZO1 antibody at 1/600 dilution. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH2O and PBS, and then probed with the primary antibody at 1/600 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.



**Immunohistochemistry-Paraffin: PIEZO1 Antibody (2-10) [NBP2-75617]** - Rat hippocampus tissue with Mouse anti-FAM38A/PIEZO1 antibody at 1/600 dilution. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH2O and PBS, and then probed with the primary antibody at 1/600 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.





## Publications

Kelley B, Zhang EY, Khalfaoui L et al. Piezo channels in stretch effects on developing human airway smooth muscle American journal of physiology. Lung cellular and molecular physiology 2023-09-12 [PMID: 37697925]

Savadipour A, Nims RJ, Rashidi N et al. Membrane stretch as the mechanism of activation of PIEZO1 ion channels in chondrocytes Proceedings of the National Academy of Sciences of the United States of America 2023-07-25 [PMID: 37459546]

Knoblauch SV, Desai SH, Dombroski JA et al. Chemical Activation and Mechanical Sensitization of Piezo1 Enhance TRAIL-Mediated Apoptosis in Glioblastoma Cells ACS omega 2023-05-16 [PMID: 37214705]

Luu N, Bajpai A, Li R et al. Aging-associated Decline in Vascular Smooth Muscle Cell Mechanosensation is Mediated by Piezo1 Channel bioRxiv : the preprint server for biology 2023-04-29 [PMID: 37163041]

Chen S, Li Z, Chen D et al. Piezo1-mediated mechanotransduction promotes enthesal pathological new bone formation in ankylosing spondylitis Annals of the rheumatic diseases 2022-12-21 [PMID: 36543525]

Yao M, Tijore A, Cheng D et al. Force- and cell state-dependent recruitment of Piezo1 drives focal adhesion dynamics and calcium entry Science advances 2022-11-11 [PMID: 36351022] (ICC/IF, Human)

Sforna L, Michelucci A, Morena F et al. Piezo1 controls cell volume and migration by modulating swelling-activated chloride current through Ca<sup>2+</sup> influx Journal of cellular physiology 2021-12-15 [PMID: 34913176]

Li JV, Ng CA, Cheng D et al. Modified N-linked glycosylation status predicts trafficking defective human Piezo1 channel mutations Communications biology 2021-09-06 [PMID: 34489534] (EM, WB, Human)

Guo XW, Zhang H, Huang JQ et al. PIEZO1 Ion Channel Mediates Ionizing Radiation-Induced Pulmonary Endothelial Cell Ferroptosis via Ca<sup>2+</sup>/Calpain/VE-Cadherin Signaling Frontiers in molecular biosciences 2021-09-09 [PMID: 34568428] (WB, Human)





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### **Products Related to NBP2-75617**

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HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-96778	Mouse IgG2a Isotype Control (M2A)
NBP1-78537PEP	PIEZO1 Antibody Blocking Peptide

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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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