Product Datasheet

PIEZO2 Antibody - BSA Free
NBP1-78538

Unit Size: 0.1 ml

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

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Publications: 6

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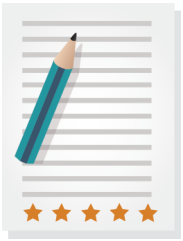
Updated 10/23/2024 v.20.1



NBP1-78538

PIEZO2 Antibody - BSA Free

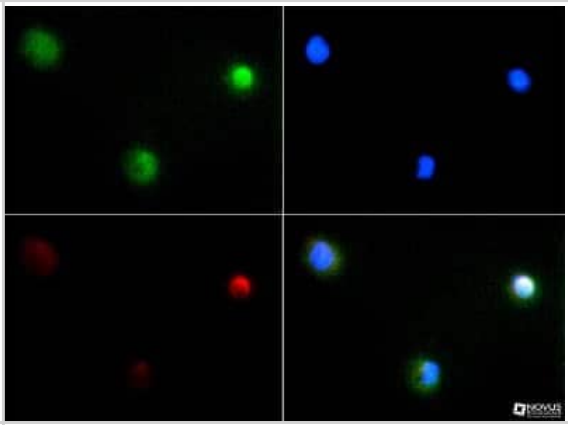
Product Information	
Unit Size	0.1 ml
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS

Product Description	
Host	Rabbit
Gene ID	63895
Gene Symbol	PIEZO2
Species	Human, Mouse, Porcine
Reactivity Notes	Porcine reactivity reported in scientific literature (PMID: 25385580)
Immunogen	A synthetic peptide made to an internal portion of the human PIEZO2 protein (between residues 1450-1500). [UniProt Q9H5I5]

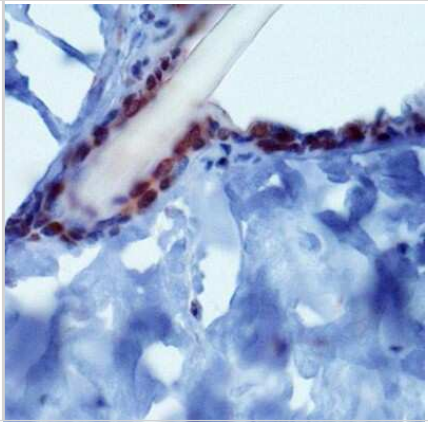
Product Application Details	
Applications	Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin
Recommended Dilutions	Immunohistochemistry 1:400, Immunocytochemistry/ Immunofluorescence 1:100, Immunohistochemistry-Paraffin 1:400
Application Notes	In ICC/IF, membrane staining was observed in A431 cells. In IHC-P, membrane and cytoplasmic staining is seen in mouse epidermis tissue. Prior to immunostaining paraffin tissues, antigen retrieval with sodium citrate buffer (pH 6.0) is recommended.

Images

Immunocytochemistry/Immunofluorescence: PIEZO2 Antibody [NBP1-78538] - PIEZO2 antibody was tested at 1:100 in A431 cells with FITC (green). Nuclei and alpha-tubulin were counterstained with DAPI (blue) and Dylight 550 (red).



Immunohistochemistry: PIEZO2 Antibody [NBP1-78538] - Analysis of PIEZ02 in mouse epidermis using DAB with hematoxylin counterstain.



Publications

Scavuzzo MA, Letai KC, Maeno-Hikichi Y et al. Enteric glial hub cells coordinate intestinal motility bioRxiv : the preprint server for biology 2023-06-09 [PMID: 37333182] (ICC/IF)

Matsunaga M, Kimura M, Ouchi T et al. Mechanical Stimulation-Induced Calcium Signaling by Piezo1 Channel Activation in Human Odontoblast Reduces Dentin Mineralization Frontiers in Physiology 2021-08-24 [PMID: 34504437]

Luo Z, Liao X, Luo L Et al. Extracellular ATP and cAMP signaling promote Piezo2-dependent mechanical allodynia after trigeminal nerve compression injury Journal of neurochemistry 2021-11-10 [PMID: 34757653]

Etem EO, Ceylan GG, Ozaydın S The increased expression of Piezo1 and Piezo2 ion channels in human and mouse bladder carcinoma. Adv Clin Exp Med. [PMID: 30010255] (IHC-P, Human)

Narayanan P, Sondermann J, Rouwette T et al. Native Piezo2 Interactomics Identifies Pericentrin as a Novel Regulator of Piezo2 in Somatosensory Neurons. J Proteome Res 2016-08-05 [PMID: 27345391]

Lee W, Leddy Ha, Chen Y et al. Synergy between Piezo1 and Piezo2 channels confers high-strain mechanosensitivity to articular cartilage. Proc. natl. Acad. Sci. U.S.A. 2014-11-25 [PMID: 25385580] (IHC-P, Porcine)

Procedures

Western Blot protocol for PIEZO2 Antibody (NBP1-78538)
PIEZO2 Antibody:
Western Blot Protocol

1. Perform SDS-PAGE on samples to be analyzed, loading 40 ug of total protein per lane.
2. Transfer proteins to membrane according to the instructions provided by the manufacturer of the membrane and transfer apparatus.
3. Stain according to standard Ponceau S procedure (or similar product) to assess transfer success, and mark molecular weight standards where appropriate.
4. Rinse the blot.
5. Block the membrane using standard blocking buffer for at least 1 hour.
6. Wash the membrane in wash buffer three times for 10 minutes each.
7. Dilute primary antibody in blocking buffer and incubate 1 hour at room temperature.
8. Wash the membrane in wash buffer three times for 10 minutes each.
9. Apply the diluted HRP conjugated secondary antibody in blocking buffer (as per manufacturers instructions) and incubate 1 hour at room temperature.
10. Wash the blot in wash buffer three times for 10 minutes each (this step can be repeated as required to reduce background).
11. Apply the detection reagent of choice in accordance with the manufacturers instructions.

*Note: Tween-20 can be added to the blocking or antibody dilution buffer at a final concentration of 0.05-0.2%.

*The above information is only intended as a guide. The researcher should determine what protocol best meets their needs. Please follow safe laboratory procedures.

Immunohistochemistry-Paraffin protocol for PIEZO2 Antibody (NBP1-78538)
PIEZO2 Antibody:
Immunohistochemistry-Paraffin Embedded Sections

Antigen Unmasking:
Bring slides to a boil in 10 mM sodium citrate buffer (pH 6.0) then maintain at a sub-boiling temperature for 10 minutes. Cool slides on bench-top for 30 minutes.

Staining:
1. Wash sections in deionized water three times for 5 minutes each.
2. Wash sections in wash buffer for 5 minutes.
3. Block each section with 100-400 ul blocking solution for 1 hour at room temperature.
4. Remove blocking solution and add 100-400 ul diluted primary antibody. Incubate overnight at 4C.
5. Remove antibody solution and wash sections in wash buffer three times for 5 minutes each.
6. Add 100-400 ul biotinylated diluted secondary antibody. Incubate 30 minutes at room temperature.
7. Remove secondary antibody solution and wash sections three times with wash buffer for 5 minutes each.
8. Add 100-400 ul Streptavidin-HRP reagent to each section and incubate for 30 minutes at room temperature.
9. Wash sections three times in wash buffer for 5 minutes each.
10. Add 100-400 ul DAB substrate to each section and monitor staining closely.
11. As soon as the sections develop, immerse slides in deionized water.
12. Counterstain sections in hematoxylin.
13. Wash sections in deionized water two times for 5 minutes each.
14. Dehydrate sections.
15. Mount coverslips.

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Immunocytochemistry/Immunofluorescence protocol for PIEZO2 Antibody (NBP1-78538)
PIEZO2 Antibody:
Immunocytochemistry Protocol

Culture cells to appropriate density in 35 mm culture dishes or 6-well plates.
1. Remove culture medium and add 10% formalin to the dish. Fix at room temperature for 30 minutes.
2. Remove the formalin and add ice cold methanol. Incubate for 5-10 minutes.
3. Remove methanol and add washing solution (i.e. PBS). Be sure to not let the specimen dry out. Wash three times for 10 minutes.
4. To block nonspecific antibody binding incubate in 10% normal goat serum from 1 hour to overnight at room temperature.
5. Add primary antibody at appropriate dilution and incubate at room temperature from 2 hours to overnight at room temperature.
6. Remove primary antibody and replace with washing solution. Wash three times for 10 minutes.
7. Add secondary antibody at appropriate dilution. Incubate for 1 hour at room temperature.
8. Remove antibody and replace with wash solution, then wash for 10 minutes. Add Hoechst 33258 to wash solution at 1:25,0000 and incubate for 10 minutes. Wash a third time for 10 minutes.
9. Cells can be viewed directly after washing. The plates can also be stored in PBS containing Azide covered in Parafilm (TM). Cells can also be cover-slipped using Fluoromount, with appropriate sealing.

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Products Related to NBP1-78538

HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control
NBP1-78538B	PIEZO2 Antibody [Biotin]

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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