Human PIEZO2 Antibody

Monoclonal Mouse IgG_{2B} Clone # 1081503

Catalog Number: MAB11559

DESCRIPTION

Species Reactivity	Human
Specificity	Detects a synthetic peptide specific for Piezo2 around amino acid 2115 in Direct ELISA.
Source	Monoclonal Mouse IgG_{2B} Clone # 1081503
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	PIEZO2 containing synthetic peptide Accession # Q9H5I5
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose.

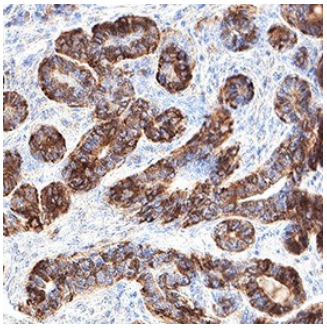
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Immunohistochemistry	0.5-15 µg/mL	Immersion fixed paraffin-embedded sections of human breast

DATA

Immunohistochemistry



Detection of PIEZO2 in Human Breast . PIEZO2 was detected in immersion fixed paraffin-embedded sections of human breast using Mouse Anti-Human PIEZO2 Monoclonal Antibody (Catalog # MAB11559) at 0.05 µg/ml for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to the cell surface. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

PREPARATION AND STORAGE

Reconstitution	Reconstitute lyophilized material at 0.2mg/ml in sterile PBS. For liquid material, refer to CoA for concentration.
Shipping	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

PIEZO2 is an 318 kDa mechanosensitive nonselective cation channel, found in cell types that typically respond to physical touch. PIEZO2 is an essential mechanotransducer for touch, proprioception, and interoception. PIEZO2 is important for aspects of breathing, bladder control, blood pressure regulation and many other processes since it is expressed in several classes of jugular and nodose ganglia neurons. Loss of function of PIEZO2 results in profound lack of proprioception and is diagnosed as a rare disease caused PIEZO2 deficiency syndrome.

References:

1. Wu J, Lewis AH, Grandl J. Touch, Tension, and Transduction - The Function and Regulation of Piezo Ion Channels. Trends Biochem Sci. 2017 Jan;**42(1)**:57-71. doi: 10.1016/j.tibs.2016.09.004. Epub 2016 Oct 12. PMID: 27743844; PMCID: PMC5407468.
2. Szczot M, Nickolls AR, Lam RM, Chesler AT. The Form and Function of PIEZO2. Annu Rev Biochem. 2021 Jun 20;**90:**507-534. doi: 10.1146/annurev-biochem-081720-023244. PMID: 34153212; PMCID: PMC8794004.

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