Human/Mouse/Rat Pannexin-1 Antibody

Monoclonal Mouse IgG_{2B} Clone # 720505

Catalog Number: MAB7097

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human Pannexin-1 in direct ELISAs and Western blots. In Western blots, no cross-reactivity with recombinant human Pannexin-2 or -3 is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 720505
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human Pannexin-1 Pro298-Asp376 Accession # Q96RD7
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

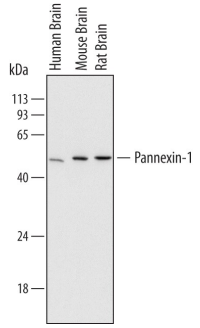
APPLICATIONS

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
Western Blot	1 µg/mL	See Below

DATA

Western Blot



Detection of Human, Mouse, and Rat Pannexin-1 by Western Blot. Western blot shows lysates of human brain tissue, mouse brain tissue, and rat brain tissue. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human/Mouse/Rat Pannexin-1 Monoclonal Antibody (Catalog # MAB7097) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for Pannexin-1 at approximately 48 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
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.

BACKGROUND

Pannexin-1 (PANX1) is an approximately 45 kDa member of the Pannexin family of four-transmembrane channel proteins with a conserved pattern of cysteines. It is expressed on epithelial cells, neuronal and glial cells, cardiac myocytes, T cells, and erythrocytes. Pannexin-1 forms large pore hexameric channels or heteromeric channels with Pannexin-2 and enables the efflux of ATP and UTP. Its conductance is increased in response to hypoxia, isotonic stress, NMDA R activation, and Caspase-3 and -7 activation during apopotosis. Extracellular release of ATP through Pannexin-1 activates P2X7 receptors which in turn induces the closure of Pannexin-1 channels. Pannexin-1 cooperates with P2X7 for inflammasome activation, Caspase-1 activation, and the release of mature IL-1β and also regulates T cell activation at the immunological synapse. Within aa 298-376 (in the C-terminal cytoplasmic domain), human Pannexin-1 shares 96% and 98% aa sequence identity with mouse and rat Pannexin-1, respectively. Alternate splicing generates an additional isoform that lacks the C-terminal four amino acids in the cytoplasmic tail.

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