

Pannexin-1 (D-12): sc-515941

BACKGROUND

Gap junctions are formed by a hexameric group of proteins called connexins for the transport of low molecular weight proteins from cell to cell. Connexins, which are present in all metazoan organisms, serve diverse functions ranging from control of cell growth and differentiation to electric conduction in excitable tissues. Several mammalian cells with malignant phenotypes exhibit decreased connexin expression and gap junction communication. The pannexin gene family encodes a second class of putative gap junction proteins. Pannexins are highly conserved in invertebrates and mammals, indicating the importance of their gap junctional coupling function. Mammalian Pannexin-1 and Pannexin-3 are closely related, while Pannexin-2 is a more distant relation. Pannexin-1 is a transmembrane protein that forms calcium-permeable gap junctions between adjacent cells and in the endoplasmic reticulum. In erythrocytes, Pannexin-1 forms a mechanosensitive ATP-permeable channel in the nonjunctional plasma membrane.

CHROMOSOMAL LOCATION

Genetic locus: PANX1 (human) mapping to 11q21.

SOURCE

Pannexin-1 (D-12) is a mouse monoclonal antibody raised against amino acids 127-426 mapping at the C-terminus of Pannexin-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Pannexin-1 (D-12) is available conjugated to agarose (sc-515941 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515941 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515941 PE), fluorescein (sc-515941 FITC), Alexa Fluor® 488 (sc-515941 AF488), Alexa Fluor® 546 (sc-515941 AF546), Alexa Fluor® 594 (sc-515941 AF594) or Alexa Fluor® 647 (sc-515941 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515941 AF680) or Alexa Fluor® 790 (sc-515941 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Pannexin-1 (D-12) is recommended for detection of Pannexin-1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Pannexin-1 siRNA (h): sc-61287, Pannexin-1 shRNA Plasmid (h): sc-61287-SH and Pannexin-1 shRNA (h) Lentiviral Particles: sc-61287-V.

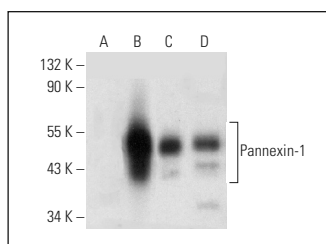
Molecular Weight of Pannexin-1: 48 kDa.

Positive Controls: Pannexin-1 (h): 293 Lysate: sc-113361, SH-SY5Y cell lysate: sc-3812 or U-251-MG whole cell lysate: sc-364176.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Pannexin-1 (D-12): sc-515941. Western blot analysis of Pannexin-1 expression in non-transfected 293: sc-110760 (A), human Pannexin-1 transfected 293: sc-113361 (B), SH-SY5Y (C) and U-251-MG (D) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Diem, K., et al. 2020. Mechanical stretch activates piezo1 in caveolae of alveolar type I cells to trigger ATP release and paracrine stimulation of surfactant secretion from alveolar type II cells. *FASEB J.* 34: 12785-12804.
2. Rhodes, G., et al. 2021. Pannexin1: role as a sensor to injury is attenuated in pretype 2 corneal diabetic epithelium. *Anal. Cell. Pathol.* 2021: 4793338.
3. El-Maadawy, W.H., et al. 2022. Probenecid induces the recovery of renal ischemia/reperfusion injury via the blockade of Pannexin 1/P2X7 receptor axis. *Life Sci.* 308: 120933.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.