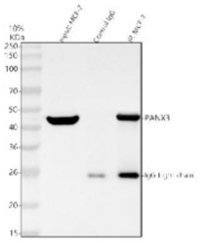
PANX3 Antibody / Pannexin 3 (FY13071)

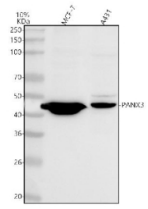
Catalog No.	Formulation	Size
FY13071	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

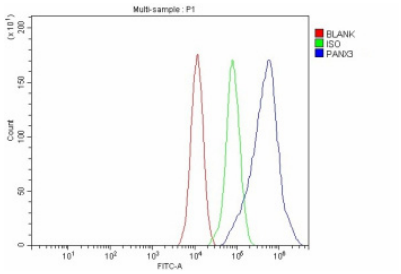
Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q96QZ0
Applications	Western Blot : 0.25-0.5ug/ml Immunoprecipitation : 2-4ug/500ug of lysate Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This PANX3 antibody is available for research use only.



Immunoprecipitating (IP) PANX3 in MCF-7 whole cell lysate. Western blot analysis of PANX3 using anti-PANX3 antibody; Lane 1: MCF-7 whole cell lysates (30ug); Lane 2: Rabbit control IgG instead of anti-PANX3 antibody in MCF-7 whole cell lysate; Lane 3: anti-PANX3 antibody (2ug) + MCF-7 whole cell lysate (500ug). After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-PANX3 antibody at a dilution of 0.5 ug/ml and probed with a goat anti-rabbit IgG-HRP secondary antibody. The signal is developed using ECL Plus Western Blotting Substrate. A specific band was detected for PANX3 at approximately 45 kDa. The expected molecular weight of PANX3 is at 45 kDa.



Western blot analysis of PANX3 using anti-PANX3 antibody. Lane 1: human MCF-7 whole cell lysates, Lane 2: human whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-PANX3 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. A specific band was detected for PANX3 at approximately 45 kDa. The expected molecular weight of PANX3 is ~45 kDa.



Flow Cytometry analysis of MCF-7 cells using anti-PANX3 antibody. Overlay histogram showing MCF-7 cells stained with (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-PANX3 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

Description

PANX3 antibody detects Pannexin 3, a membrane channel-forming glycoprotein that mediates ATP release and cell communication. The UniProt recommended name is Pannexin 3 (PANX3). This protein belongs to the pannexin family, which forms hexameric channels in the plasma membrane, enabling the passage of ions and small metabolites involved in signaling and differentiation.

Functionally, PANX3 antibody recognizes a 392-amino-acid integral membrane protein expressed predominantly in skin, cartilage, and bone. Pannexin 3 mediates ATP and ion fluxes that influence osteoblast differentiation, chondrocyte maturation, and keratinocyte communication. It also interacts with intracellular calcium signaling pathways, linking membrane excitability to tissue remodeling and growth.

The PANX3 gene, located on chromosome 11q24.2, encodes a protein with four transmembrane helices, two extracellular loops with conserved cysteines, and intracellular N- and C-termini. PANX3 localizes to both plasma membrane and endoplasmic reticulum, participating in calcium homeostasis and metabolic coupling. Its expression is upregulated during endochondral ossification, contributing to skeletal development.

Pathologically, abnormal PANX3 activity is implicated in osteoarthritis, cartilage degeneration, and abnormal bone formation. Overexpression enhances ATP release and promotes differentiation, while deficiency can impair mineralization and growth plate organization. In addition, pannexin signaling has been studied in cancer and inflammation for its role in autocrine ATP signaling and cell death regulation.

PANX3 antibody is suitable for western blotting, immunofluorescence, and immunohistochemistry, making it a valuable tool for studies of bone biology, differentiation, and tissue communication. NSJ Bioreagents supplies PANX3 antibody reagents validated for use in osteogenic signaling and cellular communication research.

Structurally, Pannexin 3 forms hexameric channels resembling connexins but does not form gap junctions. Instead, it functions as an ATP release channel regulated by voltage, phosphorylation, and extracellular calcium. Research with this antibody helps clarify PANX3's role in skeletal physiology and pathophysiology.

Application Notes

Optimal dilution of the PANX3 antibody should be determined by the researcher.

Immunogen

E.coli-derived human PANX3 recombinant protein (Position: M1-P392) was used as the immunogen for the PANX3 antibody.

Storage

After reconstitution, the PANX3 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.