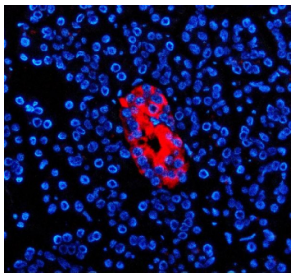
SLC30A8 Antibody / ZNT8 / Zinc transporter 8 (FY12920)

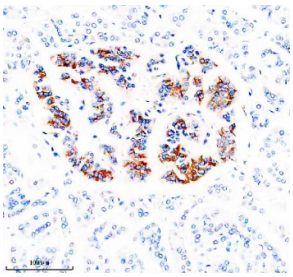
Catalog No.	Formulation	Size
FY12920	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

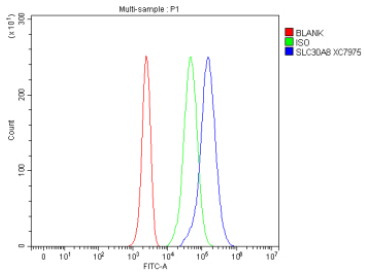
Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q8IWU4
Applications	Immunohistochemistry : 2-5ug/ml Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This SLC30A8 antibody is available for research use only.



Immunofluorescent staining of ZNT8/SLC30A using anti-SLC30A antibody (red). ZNT8/SLC30A was detected in a paraffin-embedded section of human pancreas tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 ug/ml rabbit anti-SLC30A antibody overnight at 4oC. Cy3 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. The section was counterstained with DAPI nuclear stain (blue). Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Immunohistochemical staining of ZNT8/SLC30A using anti-SLC30A antibody. ZNT8/SLC30A was detected in a paraffin-embedded section of human pancreas tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-SLC30A antibody overnight at 4oC. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37oC. The tissue section was developed using an HRP secondary and DAB substrate.



Flow Cytometry analysis of Jurkat cells using anti-SLC30A antibody. Overlay histogram showing Jurkat 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-SLC30A 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

SLC30A8 antibody detects Zinc transporter 8, a pancreatic beta-cell-specific membrane protein that mediates zinc transport into insulin secretory granules. Encoded by the SLC30A8 gene on chromosome 8q24.11, this transporter belongs to the solute carrier family 30 (SLC30), which regulates intracellular zinc homeostasis. Zinc transported by ZNT8 is essential for insulin crystallization, storage, and secretion, making this protein a key regulator of glucose metabolism and endocrine function.

Structurally, ZNT8 is a 369-amino-acid multi-pass membrane protein of approximately 41 kilodaltons containing six transmembrane domains and a cytosolic C-terminus that mediates zinc ion transport driven by proton exchange. It localizes specifically to insulin granule membranes in pancreatic beta cells, where it sequesters zinc into vesicles, facilitating insulin hexamer formation and regulated exocytosis. ZNT8 expression is controlled by glucose and insulin signaling, reflecting its integration into metabolic feedback loops.

The SLC30A8 antibody is widely used in endocrinology, diabetes, and metabolism research to study zinc transport, insulin secretion, and beta-cell physiology. Western blot analysis detects a 41 kilodalton band corresponding to ZNT8, while immunofluorescence reveals granular cytoplasmic staining restricted to pancreatic islets. This antibody provides an excellent tool for exploring beta-cell biology and identifying autoantibody targets in diabetes pathogenesis.

Loss-of-function mutations in SLC30A8 reduce zinc transport activity and have been associated with altered diabetes risk. While some variants protect against type 2 diabetes by enhancing beta-cell resilience, others increase susceptibility by impairing insulin maturation and secretion. ZNT8 is also a major autoantigen in type 1 diabetes, with circulating autoantibodies serving as biomarkers for early disease detection. The SLC30A8 antibody enables detailed characterization of ZNT8 expression, localization, and immunogenicity in metabolic and autoimmune contexts. NSJ Bioreagents validates this antibody for its applications, ensuring reliable detection for pancreatic and metabolic research.

Application Notes

Optimal dilution of the SLC30A8 antibody should be determined by the researcher.

Immunogen

E.coli-derived human ZNT8/SLC30A recombinant protein (Position: M1-C361) was used as the immunogen for the SLC30A8 antibody.

Storage

After reconstitution, the SLC30A8 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.