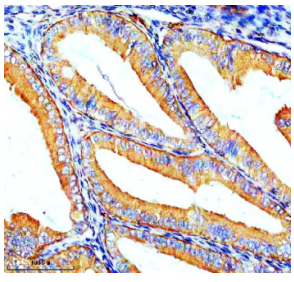
SLC39A8 Antibody / ZIP8 / Solute carrier family 39 member 8 (FY12614)

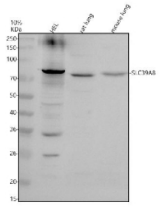
Catalog No.	Formulation	Size
FY12614	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

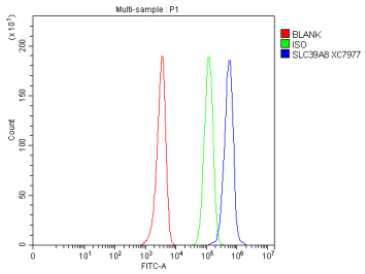
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9C0K1
Localization	Cytoplasm, cell membrane
Applications	Western Blot: 0.25-0.5ug/ml Immunohistochemistry: 2-5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This SLC39A8 antibody is available for research use only.



Immunohistochemical staining of ZIP8/SLC39A8 using anti-SLC39A8 antibody. ZIP8/SLC39A8 was detected in a paraffin-embedded section of human endometrial cancer 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-SLC39A8 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.



Western blot analysis of ZIP8/SLC39A8 using anti-SLC39A8 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human HEL whole cell lysates, Lane 2: rat lung tissue lysates, Lane 3: mouse lung tissue 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-SLC39A8 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 an ECL Plus Western Blotting Substrate. Western blot probed with anti-SLC39A8 shows a dominant band at ~80 kDa, higher than the predicted ~50 kDa, consistent with the N-glycosylated form of the ZIP8 transporter.



Flow Cytometry analysis of HEL cells using anti-SLC39A8 antibody. Overlay histogram showing HEL 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-SLC39A8 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

SLC39A8 antibody detects Solute carrier family 39 member 8, also called Metal cation symporter ZIP8 and Zrt- and Irt-like protein 8, and a divalent metal ion transporter primarily responsible for manganese and zinc uptake into cells. SLC39A8 is essential for metal ion homeostasis, mitochondrial function, and glycosylation. The SLC39A8 antibody is widely used in biochemistry, metabolism, and neurobiology research to study metal transport, oxidative stress, and enzyme regulation.

SLC39A8 is encoded by the SLC39A8 gene located on human chromosome 4q24. The protein is approximately 490 amino acids in length and belongs to the ZIP (Zrt/Irt-like protein) family of metal ion transporters. It localizes to the plasma membrane and mitochondria, where it facilitates cellular uptake of manganese, zinc, iron, and other cations necessary for enzymatic function and metabolic regulation.

The SLC39A8 antibody detects a 55 kilodalton band by western blot and reveals plasma membrane and cytoplasmic staining under immunofluorescence. Through regulation of manganese transport, SLC39A8 supports the activity of critical metalloenzymes such as mitochondrial superoxide dismutase and glycosyltransferases. Deficiency of SLC39A8 leads to systemic manganese depletion, mitochondrial dysfunction, and defective glycoprotein synthesis.

Genetic mutations in SLC39A8 are associated with congenital disorders of glycosylation, intellectual disability, and dystonia. The transporter also influences susceptibility to metabolic syndrome, hypertension, and schizophrenia through its impact on trace element homeostasis and inflammation. Overexpression or mislocalization of SLC39A8 alters cellular redox balance and zinc-dependent signaling pathways.

Because of its central role in metal transport and mitochondrial metabolism, SLC39A8 serves as a biomarker for trace element disorders and mitochondrial pathologies. NSJ Bioreagents provides a validated SLC39A8 antibody optimized for its applications, supporting detailed analysis of trace metal regulation and metabolic health.

Application Notes

Optimal dilution of the SLC39A8 antibody should be determined by the researcher.

Immunogen

E.coli-derived human ZIP8/SLC39A8 recombinant protein (Position: E23-A438) was used as the immunogen for the SLC39A8 antibody.

Storage

After reconstitution, the SLC39A8 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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