Mouse SLC39A4 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF7315

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse SLC39A4 in direct ELISAs.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse SLC39A4 Met1-Tyr337 Accession # Q78IQ7
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 as a 0.2 μm filtered solution in PBS.

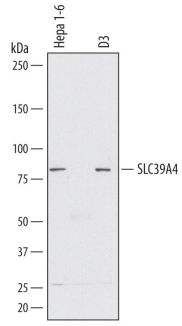
APPLICATIONS

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
Flow Cytometry	2.5 µg/10^6 cells	See Below
Immunohistochemistry	5-15 µg/mL	See Below

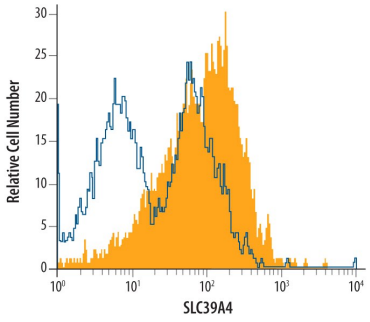
DATA

Western Blot



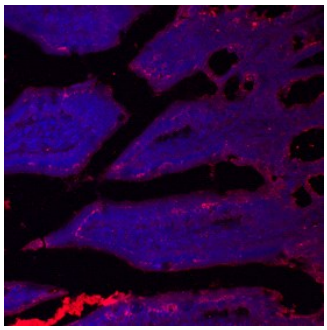
Detection of Mouse SLC39A4 by Western Blot. Western blot shows lysates of Hepa 1-6 mouse hepatoma cell line and D3 mouse embryonic stem cell line. PVDF membrane was probed with 1 µg/mL of Goat Anti-Mouse SLC39A4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7315) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for SLC39A4 at approximately 80 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Flow Cytometry



Detection of SLC39A4 in Hepa 1-6 Mouse Cell Line by Flow Cytometry.
Hepa 1-6 mouse hepatoma cell line was stained with Goat Anti-Mouse SLC39A4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7315, filled histogram) or control antibody (Catalog # AB-108-C, open histogram), followed by Allophycocyanin-conjugated Anti-Goat IgG Secondary Antibody (Catalog # F0108).

Immunohistochemistry



SLC39A4 in Mouse Small Intestine.
SLC39A4 was detected in immersion fixed frozen sections of adult mouse small intestine using Goat Anti-Mouse SLC39A4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7315) at 10 µg/mL overnight at 4 °C. Tissue was stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to intestinal epithelial cells. View our protocol for Fluorescent IHC Staining of Frozen Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 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.

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BACKGROUND

SLC39A4 (Solute carrier family 39 member 4; also Zip-4) is a 75-90 kDa member of the ZIP transporter family of proteins. It is expressed by select cell types, including pancreatic β-cells plus epithelium of the choroid plexus and intestine. SLC39A4 is part of a zinc-sensitive cell cycling system. When extracellular zinc levels are high, SLC39A4 is generally found internally associated with endosomes, and is unavailable at the cell membrane to transport zinc into the cell. Under low zinc conditions, SLC39A4 generally appears in the plasma membrane to ensure adequate zinc uptake in the face of limited zinc availability. Mouse SLC39A4 is a 660 amino acid (aa) six transmembrane (TM) glycoprotein. It contains a long N-terminal extracellular region (aa 1-337) followed by six TM segments (aa 338-651) and a short C-terminal nine aa extracellular tail (aa 652-660). There is one splice variant that shows a 16 aa substitution for aa 1-63. SLC39A4 undergoes cell-specific proteolytic processing in response to low zinc concentrations. Cleavage occurs in the N-terminal extracellular region to generate a soluble 35 kDa polypeptide and a 37 kDa six TM integral membrane protein. This does not appear to be an inactivating mechanism. Over aa 1-337, mouse SLC39A4 shares 84% and 59% aa sequence identity with rat and human SLC39A4, respectively.