

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse TGN38 in ELISAs.
Source	Monoclonal Rat IgG _{2B} Clone # 831629
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant mouse TGN38 His320-Leu349 Accession # Q62313
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 either lyophilized or as a 0.2 µm filtered solution in PBS.

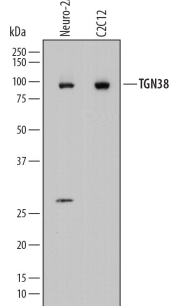
APPLICATIONS

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
Immunocytochemistry	8-25 µg/mL	See Below

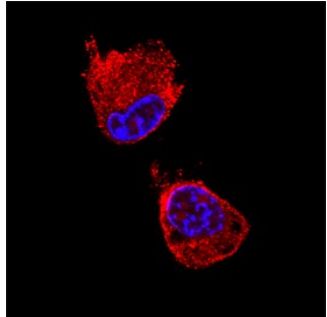
DATA

Western Blot



Detection of Mouse TGN38 by Western Blot.
Western blot shows lysates of Neuro-2A mouse neuroblastoma cell line and C2C12 mouse myoblast cell line. PVDF membrane was probed with 1 µg/mL of Rat Anti-Mouse TGN38 Monoclonal Antibody (Catalog # MAB7944) followed by HRP-conjugated Anti-Rat IgG Secondary Antibody (Catalog # HAF005). A specific band was detected for TGN38 at approximately 90 kDa (as indicated). This experiment was conducted under reducing conditions and using [Immunoblot Buffer Group 1](#).

Immunocytochemistry



TGN38 in NIH-3T3 Mouse Cell Line.
TGN38 was detected in immersion fixed NIH-3T3 mouse embryonic fibroblast cell line using Rat Anti-Mouse TGN38 Monoclonal Antibody (Catalog # MAB7944) at 25 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Rat IgG Secondary Antibody (red; Catalog # NL013) and counterstained with DAPI (blue). Specific staining was localized to vesicles in the cytoplasm. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 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. <ul style="list-style-type: none"> • 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.

BACKGROUND

TGN38A (also Tgoln1, Trans-Golgi network integral membrane protein 1) is an integral membrane protein associated with intracellular protein trafficking. Although its predicted MW is 38 kDa, due to a high proline content and extensive polysialylation, it runs anomalously at 80-90 kDa in SDS-PAGE. Tgoln1 is ubiquitously expressed and is generally associated with the trans-Golgi complex, a structure adjacent to the trans-component of the Golgi Apparatus. In this complex, both secretory and membrane proteins are sorted and forwarded to various compartments such as lysosomes, endosomes, the cell membrane and secretory granules. TGN38A apparently cycles between the trans-Golgi network and the cell membrane, returning to the trans-Golgi via the endosomal system. Part of its mobility is mediated by an interaction between TGN38A, neurabin and actin. Integrin β1 is one molecule suggested to be transported by TGN38A. Mature mouse TGN38A is a 336 amino acid (aa) type I transmembrane glycoprotein. It contains a 281 aa extracellular region (aa 18-298) plus a 34 aa cytoplasmic domain. The extracellular region possesses six sequential octapeptide repeats (aa 131-178) plus two utilized phosphorylation sites (Ser230 and Ser231). The cytoplasmic domain contains an endocytosis signal (Ser344-Leu349) that requires a free hydroxyl on Ser344 for proper routing. The mouse genome has two Tgn38 genes, Tgn38A and Tgn38B/Tgoln2. They differ in two ways. First there is a two aa insertion after Pro47, and an eight aa insertion after Thr154 in Tgn38B and, second, Tgn38B expression is restricted, occurring in mouse strain ICR, while Tgn38A is widespread and found in strains ICR, BALB/c and C57BL/6. Over aa 320-349, mouse and rat Tgoln1 are identical in aa sequence. There is no strict human structural counterpart to mouse Tgoln1/Tgn38A. Human does, however, possess a similar functioning molecule termed TGN46/48/51, and over the short aa stretch 320-349, mouse and human TGN molecules share 96% aa sequence identity.