Mouse TGN38 Alexa Fluor® 647-conjugated Antibody

Monoclonal Rat IgG_{2B} Clone # 831629

Catalog Number: FAB7944R

100 µg

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	*E. coli*-derived recombinant mouse TGN38 His320-Leu349 Accession # Q62313
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

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.

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