

DESCRIPTION

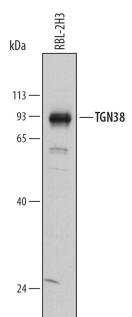
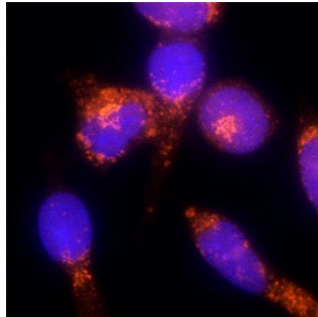
Species Reactivity	Rat
Specificity	Detects rat TGN38 in direct ELISAs and Western blots. In direct ELISAs, approximately 15% cross-reactivity with recombinant mouse TGN38 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Human embryonic kidney cell line HEK293-derived recombinant rat TGN38 Leu18-Ser303 Accession # P19814
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	0.25 µg/mL	See Below
Immunocytochemistry	5-15 µg/mL	See Below

DATA

<p>Western Blot</p>  <p>Detection of Rat TGN38 by Western Blot. Western blot shows lysates of RBL-2H3 rat basophilic leukemia cell line. PVDF membrane was probed with 0.25 µg/mL of Sheep Anti-Rat TGN38 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF8059) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). 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.</p>	<p>Immunocytochemistry</p>  <p>TGN38 in RBL-2H3 Rat Cell Line. TGN38 was detected in immersion fixed RBL-2H3 rat basophilic leukemia cell line using Sheep Anti-Rat TGN38 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF8059) at 1.7 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red; Catalog # NL010) and counterstained with DAPI (blue). Specific staining was localized to Golgi vesicles in cytoplasm. View our protocol for Fluorescent ICC Staining of Non-adherent Cells.</p>
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PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
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

TGN38 (Trans-Golgi network integral membrane protein TGN38) is an 80-100 kDa integral membrane protein that is associated with intracellular trafficking. Its name derives from the fact that its predicted MW is 38 kDa. Although TGN38 cycles continuously between the Golgi and plasma membrane via endosomal vesicles, it is principally localized to the Golgi apparatus. Functionally, TGN38 is involved in both the formation of secretory vesicles, and in the process of clathrin-mediated endocytosis. This is accomplished through the creation of a 250 kDa cytoplasmic complex composed of a Tgoln1 dimer, Rab6, and other molecules that interact with the F-actin binding proteins neurabin-I and -II. This interaction likely contributes to directional vesicle trafficking. Mature rat Tgoln1 is a type I transmembrane glycoprotein that is 340 amino acids (aa) in length. It contains a 286 aa extracellular/luminal region (aa 18-303) plus a 33 aa cytoplasmic domain (aa 325-357). The luminal region appears to be heavily glycosylated with both O- and N-linked carbohydrate, some of which terminates in polysialylation; the cytoplasmic domain contains a cytosolic trafficking motif that encompasses aa 348-353. There is one splice variant (TGN41) that contains a 26 aa substitution for the three C-terminal aa of TGN38. It has been suggested that this may heterodimerize with TGN38. Over aa 18-303, rat TGN38/Tgoln1 shares 67% aa sequence identity with the mouse ortholog to rat Tgoln1.