

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Rat                                                                                                                                                                                                                                                                         |
| <b>Specificity</b>        | Detects rat TGN38 in direct ELISAs and Western blots. In direct ELISAs, approximately 15% cross-reactivity with recombinant mouse TGN38 is observed.                                                                                                                        |
| <b>Source</b>             | Polyclonal Sheep IgG                                                                                                                                                                                                                                                        |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | Human embryonic kidney cell line HEK293-derived recombinant rat TGN38<br>Leu18-Ser303<br>Accession # P19814                                                                                                                                                                 |
| <b>Conjugate</b>          | Alexa Fluor 488<br>Excitation Wavelength: 488 nm<br>Emission Wavelength: 515-545 nm                                                                                                                                                                                         |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*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.

|                            |                                                                        |
|----------------------------|------------------------------------------------------------------------|
| <b>Western Blot</b>        | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunocytochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

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

## 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 Tgolin1 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 Tgolin1 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/Tgolin1 shares 67% aa sequence identity with the mouse ortholog to rat Tgolin1.

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