

#### DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Mouse                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects mouse GITR Ligand/TNFSF18 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant mouse (rm) APRIL, rmBAFF, rmEDA, rmFas Ligand, rmLIGHT, rmOX40 Ligand, rmTNF-α, rmTRAIL, rmTRANCE, rmTWEAK, rm4-1BB Ligand, r                  |
| <b>Source</b>             | Monoclonal Rat IgG <sub>1</sub> Clone # 721926                                                                                                                                                                                                                              |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                                                                                  |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant mouse GITR Ligand/TNFSF18<br>Thr47-Ser173<br>Accession # NP_899247                                                                                                                                                          |
| <b>Conjugate</b>          | Alexa Fluor 647<br>Excitation Wavelength: 650 nm<br>Emission Wavelength: 668 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.

**Western Blot** 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

Glucocorticoid-induced TNF receptor superfamily-related protein ligand (GITRL) is a member of the TNF superfamily (TNFSF) and has been designated TNFSF18. Mouse GITRL cDNA encodes a 173 amino acid (aa) type II membrane protein with a C-terminal extracellular domain of 131 aa, an N-terminal cytoplasmic domain of 23 aa and a transmembrane domain of 19 aa. It shares approximately 60% aa sequence identity with human GITRL (2). Mouse GITRL is expressed at high levels in macrophages, dendritic cells and B cells. The expression is transiently upregulated by LPS stimulation. GITRL binds to the type I transmembrane protein GITR/TNFRSF18, which is a member of the TNF receptor superfamily that is predominantly expressed on CD25<sup>+</sup> regulatory CD4<sup>+</sup> T cells (Treg). GITR is also expressed on naïve CD4<sup>+</sup> CD25<sup>+</sup> T cells, where its expression is upregulated after antigen-driven activation (1, 2). Ligation of GITR has been found to induce nuclear factor (NF)-κB activation via TNF receptor-associated factor 2. GITRL provides costimulatory signals for activated CD4<sup>+</sup> CD25<sup>+</sup> T cells to enhance cell proliferation and augment cytokine production. On CD4<sup>+</sup> CD25<sup>+</sup> Treg cells, GITRL also provides costimulatory signals to induce proliferation, setting Treg cells in an active/hyperproliferative state that reverses the suppressive function of Treg cells. GITRL-GITR ligation provides important costimulatory signals that play important roles in modulating diverse T cell functions (1-4).

#### PRODUCT SPECIFIC NOTICES

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