

#### 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 human GITR Ligand, recombinant mouse (rm) CD40, or rmTNF-α is observed.                                                                        |
| <b>Source</b>             | Monoclonal Rat IgG <sub>2A</sub> Clone # 337122                                                                                                                                                                                                                             |
| <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 # Q80YG2                                                                                                                                                             |
| <b>Conjugate</b>          | Alexa Fluor 405<br>Excitation Wavelength: 405 nm<br>Emission Wavelength: 421 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>ELISA Capture (Matched Antibody Pair)</b>   | Optimal dilution of this antibody should be experimentally determined. |
| <b>ELISA Detection (Matched Antibody Pair)</b> | Optimal dilution of this antibody should be experimentally determined. |
| <b>Neutralization</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

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) residues 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 up-regulated 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 up-regulated 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 co-stimulatory 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 co-stimulatory 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 co-stimulatory signals that play important roles in modulating diverse T cell functions (1-4).

#### PRODUCT SPECIFIC NOTICES

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