

DESCRIPTION

Species Reactivity	Mouse
Specificity	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.
Source	Monoclonal Rat IgG _{2A} Clone # 337122
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse GITR Ligand/TNFSF18 Thr47-Ser173 Accession # Q80YG2
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 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.

ELISA Capture (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
ELISA Detection (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
Neutralization	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) 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⁺ regulatory CD4⁺ T cells (Treg). GITR is also expressed on naïve CD4⁺ CD25⁻ 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⁺ CD25⁻ T cells to enhance cell proliferation and augment cytokine production. On CD4⁺ CD25⁺ 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).

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