

DESCRIPTION

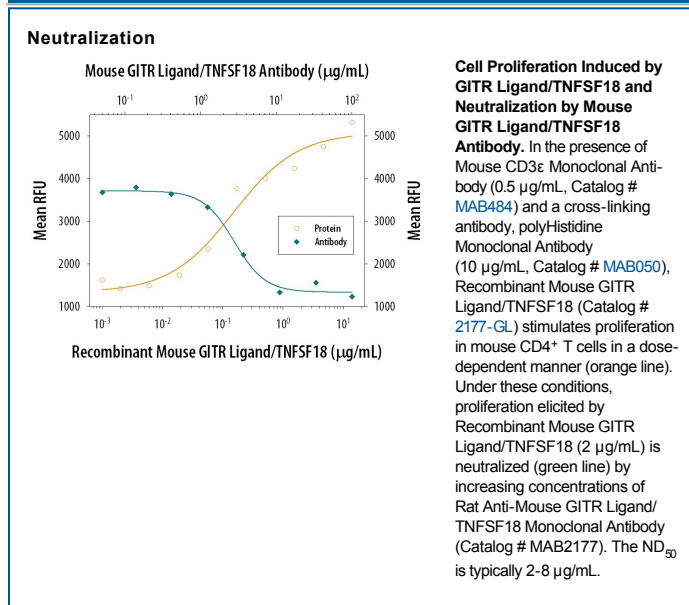
Species Reactivity	Mouse
Specificity	Detects mouse GITR Ligand/TNFSF18 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human GITR Ligand, recombinant mouse (rm) CD40, or rmTNF- α is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 337122
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse GITR Ligand/TNFSF18 Thr47-Ser173 Accession # Q80YG2
Endotoxin Level	<0.10 EU per 1 μ g of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μ m 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.

Mouse GITR Ligand/TNFSF18 Sandwich Immunoassay	Reagent
ELISA Capture	2-8 μ g/mL Mouse GITR Ligand/TNFSF18 Antibody (Catalog # MAB2177)
ELISA Detection Standard	0.1-0.4 μ g/mL Mouse GITR Ligand/TNFSF18 Biotinylated Antibody (Catalog # BAF2177) Recombinant Mouse GITR Ligand/TNFSF18 aa 47-173 (Catalog # 2177-GL)
Neutralization	Measured by its ability to neutralize GITR Ligand/TNFSF18-induced proliferation in mouse CD4 ⁺ T cells. The Neutralization Dose (ND ₅₀) is typically 2-8 μ g/mL in the presence of 2 μ g/mL Recombinant Mouse GITR Ligand/TNFSF18, 0.5 μ g/mL Mouse CD3 ϵ Monoclonal Antibody, and 10 μ g/mL of a cross-linking antibody, polyHistidine Monoclonal Antibody.

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 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

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).

References:

1. Tone, M. *et al.* (2003) Proc. Natl. Acad. Sci. USA **100**:15059.
2. Ji, H. *et al.* (2004) J. Immunology **172**:5823.
3. Kanamaru, F. *et al.* (2004) J. Immunology **172**:7306.
4. Ronchetti, S. *et al.* (2004) Eur. J. Immunology **34**:613.