Mouse GITR Ligand/TNFSF18
Alexa Fluor® 700-conjugated Antibody

Monoclonal Rat IgG_1 Clone # 994529

Catalog Number: FAB21773N

100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse GITR Ligand/TNFSF18 in direct ELISAs.
Source	Monoclonal Rat IgG_1 Clone # 994529
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 # Q7TS55
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and 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.*

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10^6 cells	NS0 Cell Line Transfected with Mouse GITR Ligand/TNFSF18

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 $CD25^+$ regulatory $CD4^+$ T cells (Treg). GITR is also expressed on naïve $CD4^+$ $CD25^-$ 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 $CD4^+$ $CD25^-$ T cells to enhance cell proliferation and augment cytokine production. On $CD4^+$ $CD25^+$ Treg cells, GITRL also provides costimulatory signals to induce proliferation, setting Treg cells in an active/hyperproliferactive 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).

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.

PRODUCT SPECIFIC NOTICES

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