

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human GITR Ligand/TNFSF18 in ELISAs. In sandwich immunoassays, no cross-reactivity or interference with recombinant human (rh) APRIL, rhLIGHT, rhTNF- α , or rhVEGI is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 109114
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human GITR Ligand/TNFSF18 Glu52-Ser177 Accession # Q9UNG2
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 either lyophilized or 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.

	Recommended Concentration	Sample
Flow Cytometry	2.5 μ g/10 ⁶ cells	HUVEC human umbilical vein endothelial cells
Human GITR Ligand/TNFSF18 Sandwich Immunoassay		Reagent
ELISA Capture	2-8 μ g/mL	Human GITR Ligand/TNFSF18 Antibody (Catalog # MAB6942)
ELISA Detection Standard	0.5-2.0 μ g/mL	Human GITR Ligand/TNFSF18 Biotinylated Antibody (Catalog # BAM6943) Recombinant Human GITR Ligand/TNFSF18 (Catalog # 694-GL)
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	
Blockade of Receptor-ligand Interaction	In a functional ELISA, 0.02-0.06 μ g/mL of this antibody will block 50% of the binding of 10 ng/mL of biotinylated Recombinant Human GITR Ligand to immobilized Recombinant Human GITR/TNFRSF18 Fc Chimera (Catalog # 689-GR) coated at 2 μ g/mL (100 μ L/well). At 1 μ g/mL, this antibody will block >90% of the binding.	

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

GITR (glucocorticoid-induced TNF receptor superfamily-related protein, also named AITR, activation-inducible TNF receptor superfamily-related protein) and GITR Ligand (GITRL) are novel members of the TNF receptor (TNFR) and TNF superfamilies (SF) that have been designated TNFRSF18 and TNFSF18, respectively. Human GITR Ligand cDNA encodes a 177 amino acid type II membrane protein. The carboxy-terminal extracellular domain shows sequence identity to TNF/TNFSF2 (21%), Fas ligand/TNFSF6 (21%), TRAIL/TNFSF10 (18%), and lymphotoxin α /TNFSF1 (18%). GITR Ligand is constitutively expressed in human umbilical vein endothelial cells but is not expressed in resting or stimulated T cell lines, B cell lines or peripheral blood mononuclear cells. GITR, the receptor for GITR Ligand, is expressed at low levels in peripheral blood T cells, bone marrow, thymus, spleen and lymph nodes. In contrast to mouse GITR, expression of human GITR is not induced by treatment with dexamethasone, but is up-regulated by antigen-receptor stimulation or by treatment with soluble anti-CD3 plus anti-CD28 or PMA plus ionomycin. Ligation of GITR has been found to induce nuclear factor (NF)- κ B activation via TNF receptor-associated factor 2 and protect cells from TCR activation-induced cell death. It has been proposed that GITR Ligand and GITR may modulate T lymphocyte functions in peripheral tissues.

References:

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2. Kwon, B. *et al.* (1999) J. Biol. Chem. **274**:6056.
3. Gurney, A.L. *et al.* (1999) Curr. Biol. **9**:215.
4. Kwon, B. *et al.* (1999) Curr. Opin. Immunol. **11**:340.