Human GITR/TNFRSF18 Antibody

Monoclonal Mouse IgG_1 Clone # 110416

Catalog Number: MAB689

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human GITR in direct ELISAs and Western blots. Does not cross-react with recombinant human (rh) 4-1BB, recombinant mouse (rm) 4-1BB, rhCD27, rmCD27, rhCD30, rmCD30, rhCD40, rmCD40, rhDR3, rhDR6, rhEDAR, rmEDAR, rhFas, rmFAS, rmGITR, rhHVEM, rhLymphotoxin Rβ, rmLymphotoxin Rβ, rhNGF R, rhOPG, rmOPG, rhRANK, rmRANK, rhTAJ, rhTNF RI, rmTNF RI, rhTNF RII, or rmTNF RII.
Source	Monoclonal Mouse IgG_1 Clone # 110416
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human GITR/TNFRSF18 Gln26-Glu161 (Thr43Ala) Accession # Q9Y5U5
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm 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 µm 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
Western Blot	1 µg/mL	Recombinant Human GITR/TNFRSF18 Fc Chimera (Catalog # 689-GR) under non-reducing conditions only
Flow Cytometry	2.5 µg/10^6 cells	Human peripheral blood $CD4^+$ T cells treated with PHA
Human GITR/TNFRSF18 Sandwich Immunoassay		**Reagent**
ELISA Capture	2-8 µg/mL	Human GITR/TNFRSF18 Antibody (Catalog # MAB689)
ELISA Detection	0.1-0.4 µg/mL	Human GITR/TNFRSF18 Biotinylated Antibody (Catalog # BAF689)
Standard		Recombinant Human GITR/TNFRSF18 Fc Chimera (Catalog # 689-GR)
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, 1-2 µg/mL of this antibody will block 50% of the binding of 10 ng/mL of Recombinant Human GITR Ligand/TNFSF18 (Catalog # 694-GL) to immobilized Recombinant Human GITR/TNFRSF18 Fc Chimera (Catalog # 689-GR) coated at 2 µg/mL (100 µL/well). At 5 µg/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.** ● 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 tumor necrosis factor receptor, also named AITR, activation-inducible TNF R family member), is a 228 amino acid (aa) type I transmembrane protein belonging to the TNF R family and has been designated TNFRSF18. The GITR cytoplasmic domain has striking homology with the cytoplasmic domain of 4-1BB and CD27. Human GITR shares 55% homology with murine GITR. GITR 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 stimulation or by treatment with anti-CD3 plus anti-CD28, or PMA plus ionomycin. Human GITR ligand was identified from human umbilical vein endothelial cells and is a 177 aa polypeptide belonging to the TNF superfamily (TNFSF18). Ligation of GITR can activate NF-κB through TRAF2, and protect T cells from TCR activation-induced cell death. It has been proposed that GITR ligand and GITR may modulate T lymphocyte functions.

References:

1. Nocentini, G. *et al.* (1997) Proc. Natl. Acad. Sci. USA **94**:6216.
2. Kwon, B. *et al.* (1999) J. Biol. Chem. **274**:6056.
3. Gurney, A.L. *et al.* (1999) Current Biology **9**:215.
4. Kwon, B. *et al.* (1999) Current Opinion in Immunology **11**:340.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449