

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
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *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	Human peripheral blood CD4 ⁺ T cells treated with PHA

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

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.

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