

#### DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human GITR Ligand/TNFSF18 in direct ELISAs.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 109101
<b>Purification</b>	Protein A or G purified from ascites
<b>Immunogen</b>	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human GITR Ligand/TNFSF18 Glu52-Ser177 Accession # Q9UNG2
<b>Conjugate</b>	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
<b>Formulation</b>	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
<b>Flow Cytometry</b>	0.25-1 µg/10 <sup>6</sup> cells	HUVEC human umbilical vein endothelial cells

#### PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Do not freeze.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, 2 to 8 °C as supplied.</li> </ul>

#### 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 GITRL cDNA encodes a 177 amino acid residues 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%). GITRL 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 GITRL, 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)-κB activation via TNF receptor-associated factor 2 and protect cells from TCR activation-induced cell death. It has been proposed that GITRL and GITR may modulate T lymphocyte functions in peripheral tissues.

#### 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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