

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human GITR/TNFRSF18 in direct ELISAs and Western blots. In direct ELISAs, less than 5% cross-reactivity with recombinant mouse GITR and recombinant rat GITR is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human GITR/TNFRSF18 Gln26-Glu161 (Thr45Ala) 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.

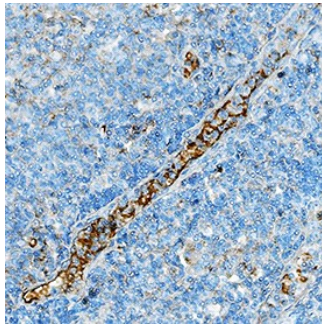
APPLICATIONS

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	0.1 µg/mL	Recombinant Human GITR/TNFRSF18 Fc Chimera (Catalog # 689-GR)
Flow Cytometry	2.5 µg/10 ⁶ cells	Human T cells treated with PHA
Immunohistochemistry	5-15 µg/mL	See Below
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 Biotinylated Human GITR Ligand/TNFRSF18 to immobilized Recombinant Human GITR/TNFRSF18 Fc Chimera (Catalog # 689-GR) coated at 2 µg/mL (100 µL/well). At 10 µg/mL, this antibody will block >90% of the binding.	

DATA

Immunohistochemistry



GITR/TNFRSF18 in Human Tonsil.
GITR/TNFRSF18 was detected in immersion fixed paraffin-embedded sections of human tonsil using Goat Anti-Human GITR/TNFRSF18 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF689) at 10 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to trabeculae sinuses. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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 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- κ B 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.