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GITR Fc Chimera, Human

Cat. No.: Z03440-100; Z03440-1

Synonyms: Tumor necrosis factor receptor superfamily member 18, TNFRSF18, Glucocorticoid-induced TNFR-related protein, CD357, TNFRSF18, AITR, GITR

Abstract: Activation-inducible TNFR family receptor; AITR; AITRTNF receptor superfamily activation-inducible protein; CD357 antigen; CD357; GITR; GITR-D; GITRtumor necrosis factor receptor superfamily member 18; Glucocorticoid-induced TNFR-related protein; TNFRSF18; tumor necrosis factor receptor superfamily, member 18

Source: *HEK293*

Sequence: Gln^{26}-Glu^{161}(Accession #: Q9Y5U5-1), expressed with a C-terminal human IgG1 Fc fragment

QRPTGGPGCGPGRLLLGTGTDARCCRVHTTRCCRDYPGEECCSEWDCMCVQPEFHCG
DPCCTTCRHHPCPPGQGVQSQGKFSFGFQCIDCASGTFSGGHEGHCKPWTDCTQFGF
LTVFPGNKTHNAVCVPGSPPAE

MW: 50 kDa, observed by reducing SDS-PAGE.

Purity: > 95% as analyzed by reducing SDS-PAGE.

Endotoxin Level: < 0.1 EU/μg, determined by LAL method.

Biological Activity: Immobilized GITR Fc Chimera, Human at 5 μg/mL (100 μL/well) can bind Biotin-GITR Ligand Fc Chiemra, Human (Z03446) with a linear range of 48-390 ng/mL when detected by Streptavidin-HRP. Background was subtracted from data points before curve fitting.

Formulation: Lyophilized from a 0.2 μm filtered solution in PBS, 5% trehalose and mannitol.

Reconstitution: Reconstituted in ddH_2O or PBS at 100 μg/ml.

Storage: Lyophilized recombinant **GITR Fc Chimera, Human** remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, Human GITR Fc Chimera should be stable up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

For research use only.

Description:

GITR (glucocorticoid-induced tumor necrosis factor receptor), also known as AITR and TNFRSF18, is a 40 kDa transmembrane glycoprotein that functions in immune regulation. Mature human GITR consists of a 137 amino acid extracellular domain (ECD) with three tandem TNFR cysteine-rich repeats, a 21 aa transmembrane segment, and a 58 aa cytoplasmic domain. Within the ECD, human GITR shares 55% and 60% aa sequence identity with mouse and rat GITR, respectively. Alternative splicing generates an isoform with a short deletion in the cytoplasmic domain and a potentially secreted isoform that is substituted within the third TNFR repeat and lacks the transmembrane and cytoplasmic regions. GITR is expressed on CD4+CD25+ regulatory T cells (Treg) as well as on subsets of thymocytes, lymph node cells, and splenocytes, and it is upregulated on antigen-activated conventional CD4+ and CD8+ T cells. GITR binding by GITR Ligand/TNFSF18 costimulates the proliferation and activation of CD4+ or CD8+ conventional T cells. It also induces the proliferation of Treg but inhibits the ability of Treg to suppress immune responses. This can result in the development of autoimmunity, increased tumor cell killing by effector T cells, and increased inflammation in arthritis, allergic asthma, and inflammatory bowel disease. GITR is also expressed on sympathetic neurons where it enhances NGF-induced neurite outgrowth and branching.

Recombinant Human GITR Fc Chimera produced in *HEK293* cells is a polypeptide chain containing 369 amino acids with the C-termimal human IgG1 Fc fragment. A fully biologically active molecule, rhGITR has a molecular mass of 50 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques at GenScript.

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