

Active Recombinant Human TNFRSF18 protein, Fc/Avi-tagged, Biotinylated

Cat. No. TNFRSF18-051H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Biotinylated Recombinant Human TNFRSF18(Gln26-Glu161) protein, fused to Fc/Avi tag at the C-terminus, was expressed in CHO cells .
Species	Human
Source	CHO
ProteinLength	Gln26-Glu161
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 (1, 2). Mature human GITR consists of a 137 amino acid (aa) extracellular domain (ECD) with three tandem TNFR cysteine-rich repeats, a 21 aa transmembrane segment, and a 58 aa cytoplasmic domain (3, 4). 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 (4-6), and it is upregulated on antigen-activated conventional CD4+ and CD8+ T cells (3, 4, 6, 7). GITR binding by GITR Ligand/TNFSF18 costimulates the proliferation and activation of CD4+ or CD8+ conventional T cells (3, 7-9). It also induces the proliferation of Treg (8, 10) but

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inhibits the ability of Treg to suppress immune responses (5, 8, 11-13). This can result in the development of autoimmunity, increased tumor cell killing by effector T cells (5, 11), and increased inflammation in arthritis, allergic asthma, and inflammatory bowel disease (10, 14). GITR is also expressed on sympathetic neurons where it enhances NGF-induced neurite outgrowth and branching (15).

Predicted N Terminal	Gln26 inferred from enzymatic pyroglutamate treatment revealing Arg27
Form	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.
Bio-activity	Measured by its binding ability in a functional ELISA. When Recombinant Human TNFSF18 is immobilized at 0.5 µg/mL (100 µL/well), It binds to Biotinylated Recombinant Human TNFRSF18 Fc Chimera Avi-tag with an ED50 of 0.05-0.5 µg/mL.
Molecular Mass	54-60 kDa, under reducing conditions
Endotoxin	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Applications	Bioactivity
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. 3 months, -20 to -70 °C under sterile conditions after reconstitution.
Reconstitution	Reconstitute at 500 µg/mL in PBS.

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Conjugation Biotin

GENE INFORMATION

Gene Name TNFRSF18 tumor necrosis factor receptor superfamily, member 18 [Homo sapiens]

Official Symbol TNFRSF18

Synonyms TNFRSF18; tumor necrosis factor receptor superfamily, member 18; tumor necrosis factor receptor superfamily member 18; AITR; CD357; GITR; activation-inducible TNFR family receptor; glucocorticoid-induced TNFR-related protein; TNF receptor superfamily activation-inducible protein; GITR-D;

Gene ID 8784

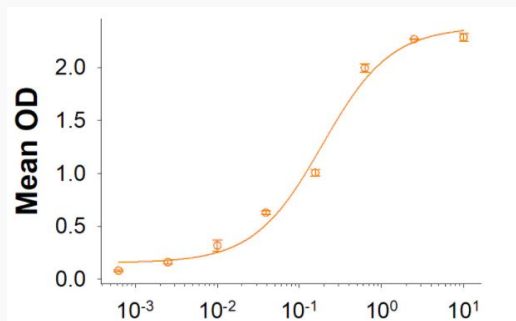
mRNA Refseq NM_004195

Protein Refseq NP_004186

MIM 603905

UniProt ID Q9Y5U5

Binding Activity

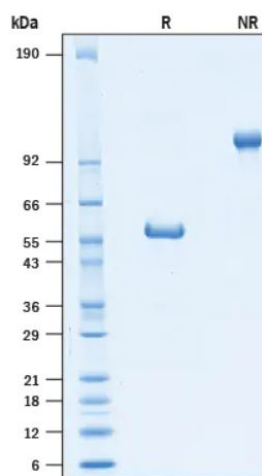


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SDS-PAGE



2 µg/lane Protein was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining.

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