

DESCRIPTION

Source *Spodoptera frugiperda*, Sf21 (baculovirus)-derived human GITR Ligand/TNFSF18 protein
Glu74-Ser199, with an N-terminal 6-His tag
Accession # Q9UNG2

N-terminal Sequence Analysis His

Predicted Molecular Mass 15 kDa

SPECIFICATIONS

SDS-PAGE 14 kDa-16 kDa, reducing conditions

Activity Measured by its binding ability in a functional ELISA.
When Recombinant Human GITR/TNFRSF18 Fc Chimera (Catalog # 689-GR) is immobilized at 0.5 µg/mL (100 µL/well), Recombinant Human GITR Ligand/TNFSF18 binds with an ED₅₀ of 30-300 ng/mL.

Endotoxin Level <0.10 EU per 1 µg of the protein by the LAL method.

Purity >97%, by SDS-PAGE under reducing conditions and visualized by silver stain.

Formulation Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 100 µg/mL in sterile PBS containing at least 0.1% human or bovine serum albumin.

Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & 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.

BACKGROUND

GITR Ligand, also known as TNFSF18 and TL6, is an approximately 30 kDa type II transmembrane glycoprotein in the TNF superfamily (1). Human GITR Ligand consists of a 50 amino acid (aa) cytoplasmic domain, a 21 aa transmembrane segment, and a 128 aa extracellular domain (ECD) (2, 3). Within the ECD, human GITR Ligand shares 56% and 60% aa sequence identity with mouse and rat GITR Ligand, respectively. GITR Ligand is expressed on antigen presenting cells, CD4⁺CD8⁻ double negative thymic precursors, vascular endothelial cells, neurons, and in the eye (4-11). Its expression is transiently up-regulated by proinflammatory stimulation (4, 8, 11). The binding of GITR Ligand to GITR on mouse CD25⁺ Treg cells permits the reactivation of T cells from Treg-induced suppression, although this does not appear to occur in humans (5, 9, 12-14). GITR Ligand binding to GITR additionally provides a costimulatory signal to activated CD4⁺ and CD8⁺ T cells and NK cells (5, 6, 15, 16). This interaction also induces reverse signaling in GITR Ligand expressing dendritic cells to suppress cellular activation through the same pathway induced by the immunosuppressant dexamethasone (17). In the brain, GITR Ligand/GITR interactions enhance NGF-mediated neurite outgrowth from sympathetic neurons (10).

References:

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