

**DESCRIPTION**

**Source** Mouse myeloma cell line, NS0-derived  
Thr47-Ser173, with an N-terminal 10-His tag  
Accession # AAO89011

**N-terminal Sequence Analysis** His

**Predicted Molecular Mass** 16 kDa

**SPECIFICATIONS**

**SDS-PAGE** 16-26 kDa, reducing conditions

**Activity** Measured by its ability to stimulate mouse T cell proliferation in the presence of anti-CD3.  
The ED<sub>50</sub> for this effect is 0.02-0.3 µg/mL in the presence of 10 µg/mL of a cross-linking antibody, Mouse Anti-polyHistidine Monoclonal Antibody (Catalog # [MAB050](#)).

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

**Purity** >95%, by SDS-PAGE under reducing conditions and visualized by silver stain.

**Formulation** Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

**Reconstitution** Reconstitute at 100 µg/mL in sterile PBS.

**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). Mouse GITR Ligand consists of a 23 amino acid (aa) cytoplasmic domain, a 19 aa transmembrane segment, and a 131 aa extracellular domain (ECD) (2 - 4). Within the ECD, mouse GITR Ligand shares 56% and 81% aa sequence identity with human and rat GITR Ligand, respectively. GITR Ligand is expressed on antigen presenting cells, CD4<sup>+</sup> CD8<sup>-</sup> double negative thymic precursors, vascular endothelial cells, neurons, and in the eye (4 - 11). Its expression is transiently up-regulated by proinflammatory stimulation (5, 8, 11). The binding of GITR Ligand to GITR on mouse CD25<sup>+</sup> Treg cells permits the reactivation of T cells from Treg-induced suppression, although this does not appear to occur in humans (9, 12 - 14). GITR Ligand binding to GITR additionally provides a costimulatory signal to activated CD4<sup>+</sup> and CD8<sup>+</sup> T cells and NK cells (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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