

## GITR Protein, Human (Biotinylated, HEK293, His)

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| Cat. No.:         | HY-P77550   |
| Synonyms:         | Tumor necrosis factor receptor superfamily member 18; CD357; TNFRSF18; AITR; GITR |
| Species:          | Human   |
| Source:           | HEK293  |
| Accession:        | Q9Y5U5 (M1-E161)  |
| Gene ID:          | 8784  |
| Molecular Weight: | Approximately 16 kDa.   |

### PROPERTIES

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| Appearance          | Lyophilized powder.  |
| Formulation         | Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.                                      |
| Endotoxin Level     | <1 EU/µg, determined by LAL method.  |
| Reconstitution      | It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.  |
| Storage & Stability | Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage. |
| Shipping            | Room temperature in continental US; may vary elsewhere.  |

### DESCRIPTION

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| Background | <p>GITR is expressed on regulatory T cells (Tregs) and some activated immune cells, including effector T lymphocytes, nature killer (NK) cells, and neutrophils<sup>[1]</sup>.</p> <p>The amino acid sequence of human GITR protein has low homology for mouse GITR protein.</p> <p>GITR does not have any enzymatic activity and signaling is propagated via recruiting TRAF-family members, specifically TRAF1, TRAF2 and TRAF5, to the GITR-signaling complex. The signaling is then mediated through NF-κB and MAPK pathways. GITR does not have any enzymatic activity and signaling is propagated via recruiting TRAF-family members, specifically TRAF1, TRAF2 and TRAF5, to the GITR-signaling complex. The signaling is then mediated through NF-κB and MAPK pathways, protecting T cells from TCR activation-induced cell death<sup>[2]</sup>.</p> <p>GITR (Glucocorticoid-induced TNFR-related protein, also known as TNFRSF18) is a type I transmembrane protein. GITR stimulates the proliferation of effector T-lymphocytes and partially reverses the immunosuppressive function of CD4+CD25+ Tregs<sup>[1]</sup>. GITR is activated by its ligand GITRL (TNFSF18). GITR induces NOS in murine macrophage in a time and dose-dependent manner<sup>[3]</sup>. GITR inhibits Multiple Myeloma (MM) cell proliferation in vitro and in vivo and induces apoptosis<sup>[4]</sup>.</p> |
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### REFERENCES

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- [1]. Tian J, et al. The Role of GITR/GITRL Interaction in Autoimmune Diseases. *Front Immunol*. 2020 Oct 9;11:588682.
- [2]. Krausz LT, et al. GITR-GITRL system, a novel player in shock and inflammation. *ScientificWorldJournal*. 2007 May 1;7:533-66.
- [3]. Shin HH, et al. Recombinant glucocorticoid induced tumor necrosis factor receptor (rGITR) induces NOS in murine macrophage. *FEBS Lett*. 2002 Mar 13;514(2-3):275-80.
- [4]. Liu Y, et al. Novel tumor suppressor function of glucocorticoid-induced TNF receptor GITR in multiple myeloma. *PLoS One*. 2013 Jun 13;8(6):e66982.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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