

GITR Protein, Cynomolgus (HEK293, His)

Cat. No.:	HY-P76362
Synonyms:	Tumor necrosis factor receptor superfamily member 18; CD357; TNFRSF18; AITR; GITR
Species:	Cynomolgus
Source:	HEK293
Accession:	XP_005545180 (M1-E155)
Gene ID:	102146362
Molecular Weight:	Approximately 16.1 kDa.

PROPERTIES

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 ₂ 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

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^[1].</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^[2].</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^[1]. GITR is activated by its ligand GITRL (TNFSF18). GITR induces NOS in murine macrophage in a time and dose-dependent manner^[3]. GITR inhibits Multiple Myeloma (MM) cell proliferation in vitro and in vivo and induces apoptosis^[4].</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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