

GITR Protein, Human (T45A, HEK293, mFc)

Cat. No.:	HY-P70822
Synonyms:	Tumor necrosis factor receptor superfamily member 18; TNFRSF18; Glucocorticoid-induced TNFR-related protein; CD357; TNFRSF18; AITR; GITR
Species:	Human
Source:	HEK293
Accession:	Q9Y5U5 (Q26-E161, T45A)
Gene ID:	8784
Molecular Weight:	40-55 kDa

PROPERTIES

AA Sequence	<p>Q R P T G G P G C G P G R L L L G T G A D A R C C R V H T T R C C R D Y P G E E</p> <p>C C S E W D C M C V Q P E F H C G D P C C T T C R H H P C P P G Q G V Q S Q G K</p> <p>F S F G F Q C I D C A S G T F S G G H E G H C K P W T D C T Q F G F L T V F P G</p> <p>N K T H N A V C V P G S P P A E</p>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
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. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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>
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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].

REFERENCES

- [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.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA