

TL1A/TNFSF15 Trimer Protein, Human (HEK293, His-Flag)

Cat. No.:	HY-P78447
Synonyms:	TL1A; VEGI-251; TNFSF15; TL1; VEGI; VEGI192A
Species:	Human
Source:	HEK293
Accession:	O95150-1 (D91-L251)
Gene ID:	9966
Molecular Weight:	65-75 kDa

PROPERTIES

AA Sequence	<p>G D K P R A H L T V V R Q T P T Q H F K N Q F P A L H W E H E L G L A F T K N R</p> <p>M N Y T N K F L L I P E S G D Y F I Y S Q V T F R G M T S E C S E I R Q A G R P</p> <p>N K P D S I T V V I T K V T D S Y P E P T Q L L M G T K S V C E V G S N W F Q P</p> <p>I Y L G A M F S L Q E G D K L M V N V S D I S L V D Y T K E D K T F F G A F L L</p>
Biological Activity	<p>1. Immobilized Human TNFSF15 Trimer His at 0.5 µg/mL (100 µL/Well) on the plate. Dose response curve for Anti-TNFSF15 Antibody hFc with the EC₅₀ of 10.2-18.7 ng/mL determined by ELISA.</p> <p>2. Immobilized Human TNFSF15 Trimer, His Tag at 1 µg/mL (100 µl/Well) on the plate. Dose response curve for Anti-TNFSF15 Antibody, hFc Tag with the EC₅₀ of ≤4 ng/mL determined by ELISA</p>
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.22 µm filtered solution of PBS, pH 7.4. Normally 8% trehalose is added as protectant 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>TL1A (Tumor necrosis factor-like cytokine 1A), also known as TNF ligand-related molecule 1 and vascular endothelial cell growth inhibitor (VEGI), is the receptor for TNFRSF25 and TNFRSF6B, acts as a regulator of mucosal immunity and participates in immunological pathways involved in the inflammatory bowel diseases (IBD) pathogenesis^[1]. TL1A belongs to</p>
------------	--

the tumor necrosis factor family, derived from endothelial cell. It is a ligand for DR3 and decoy receptor TR6/DcR3, the interaction with DR3 promotes T cell expansion during an immune response, whereas TR6 has an opposing effect. Moreover, DR3 is the death domain-containing receptor, that is upregulated during T cell activation. TL1A shows an inducible expression by TNF and IL-1alpha, and induces NF-kappaB activation and apoptosis in DR3-expressing cell lines. Meanwhile, TL1A acts as a costimulator that increases IL-2 responsiveness and secretion of proinflammatory cytokines^[2]. In addition, TL1A activates c-Jun N-terminal kinase. TL1A also activates caspase-3 leading to PARP cleavage, and inhibits the proliferation of breast carcinoma, epithelial, and myeloid tumor cells. TL1A promotes proliferation of normal human fibroblast cells. These results suggest that VEGI, a new member of the TNF family, has a signaling pathway similar to TNF and is most likely a multifunctional cytokine^[3]. Human TL1A protein has two glycosylated domains and one transmembrane domain (36-56 a.a.), and can be cleaved into membrane-type peptide fragments and soluble peptide fragments. The protein sequence of human is much different from mouse and rat with similarities of 68.42% and 70.45%, respectively.

REFERENCES

- [1]. Furfaro F, et al. TL1A: A New Potential Target in the Treatment of Inflammatory Bowel Disease. *Curr Drug Targets*. 2021;22(7):760-769.
- [2]. Migone TS, et al. TL1A is a TNF-like ligand for DR3 and TR6/DcR3 and functions as a T cell costimulator. *Immunity*. 2002 Mar;16(3):479-92.
- [3]. Haridas V, et al. VEGI, a new member of the TNF family activates nuclear factor-kappa B and c-Jun N-terminal kinase and modulates cell growth. *Oncogene*. 1999 Nov 11;18(47):6496-504.
-

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