

TNF RII/TNFRSF1B Protein, Mouse (HEK293, His-Avi)

Cat. No.:	HY-P72420
Synonyms:	Tumor necrosis factor receptor superfamily member 1b; Tnfrsf1b
Species:	Mouse
Source:	HEK293
Accession:	Q545P4 (V23-G258)
Gene ID:	21938
Molecular Weight:	35-50 kDa

PROPERTIES

AA Sequence	<p>V P A Q V V L T P Y K P E P G Y E C Q I S Q E Y Y D R K A Q M C C A K C P P G Q</p> <p>Y V K H F C N K T S D T V C A D C E A S M Y T Q V W N Q F R T C L S C S S S C T</p> <p>T D Q V E I R A C T K Q Q N R V C A C E A G R Y C A L K T H S G S C R Q C M R L</p> <p>S K C G P G F G V A S S R A P N G N V L C K A C A P G T F S D T T S S T D V C R</p> <p>P H R I C S I L A I P G N A S T D A V C A P E S P T L S A I P R T L Y V S Q P E</p> <p>P T R S Q P L D Q E P G P S Q T P S I L T S L G S T P I I E Q S T K G G</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>TNFRII (TNFRSF1B) protein is a single-pass type I membrane protein belonging to the tumor necrosis factor (TNF) family. TNFRII is the major signaling receptor for TNF-α. TNFRII protein is highly regulated and typically found in immune system cells^[1].</p> <p>The amino acid sequence of mouse TNFRII protein has low homology between human and rhesus macaque TNFRII protein (less than 85%).</p> <p>TNFRII induces apoptosis. TNFRII does not directly engage the apoptotic program, but relies on the induction of</p>
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endogenous, membrane-bound TNF, which subsequently activates TNFR1. TNFR2 stimulates the action of the endogenously produced membrane-bound TNF on TNFR1 is drastically enhanced. TNFR2 competes with TNFR1 for the recruitment of newly synthesized TRAF2-bound anti-apoptotic factors, thereby promoting the formation of a caspase-8-activating TNFR1 complex. TNFR2 competes with TNFR1 for binding of TRAF2 and the TRAF2-associated anti-apoptotic cIAP1 and cIAP2 proteins. cIAP1-initiated degradation of TRAF2, which in turn enhances receptor competition for the remaining TRAF2, cIAP1 and cIAP2 molecules. cIAP1 would have an anti-apoptotic function upon recruitment into the TNFR1 signalling complex, but would switch to a net proapoptotic function upon recruitment into the TNFR2 signalling complex^{[1][2][3]}.

REFERENCES

- [1]. Wajant H, et, al. Tumor necrosis factor signaling. *Cell Death Differ.* 2003 Jan;10(1):45-65.
- [2]. Fotin-Mleczek M, et, al. Apoptotic cross-talk of TNF receptors: TNF-R2 induces depletion of TRAF2 and IAP proteins and accelerates TNF-R1-dependent activation of caspase-8. *J Cell Sci.* 2002 Jul;115(Pt 13):2757-70.
- [3]. Masli S, et, al. Anti-inflammatory effects of tumour necrosis factor (TNF)-alpha are mediated via TNF-R2 (p75) in tolerogenic transforming growth factor-beta-treated antigen-presenting cells. *Immunology.* 2009 May;127(1):62-72.
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