TNFRII Protein, Human (174a.a, HEK293, His)

Cat. No.:	HY-P71126
Synonyms:	Tumor necrosis factor receptor superfamily member 1B; Tumor necrosis factor receptor 2; TNF-R2; Tumor necrosis factor receptor type II; TNF-RII; TNFR-II; p75; p80 TNF-alpha receptor; TNFRII; TNF RII
Species:	Human
Source:	HEK293
Accession:	P20333 (K288-S461)
Gene ID:	7133
Molecular Weight:	34-41 kDa

PROPERTIES

AA Sequence	K K K P L C L Q R E A K V P H L P A D K A R G T Q G P E Q Q H L L I T A P S S S S S S L E S S A S A L D R R A P T R N Q P Q A P G V E A S G A G E A R A S T G S S D S S P G G H G T Q V N V T C I V N V C S S S D H S S Q C S S Q A S S T M G D T D S S P S E S P K D E Q V P F S K E E C A F R S Q L E T P E T L L G S T E E K P L P L G V P D A G M K P S
Biological Activity	Measured by its ability to inhibit the TNF-alpha mediated cytotoxicity in the L-929 mouse fibroblast cells in the presence of the metabolic inhibitor actinomycin D. The ED_{50} for this effect, in the presence of 0.25 ng/mL of TNF-alpha, is 0.0018 μg/mL, corresponding to a specific activity is 5.695×10^5 units/mg.
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.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. 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	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].

The amino acid sequence of mouse TNFRII protein has low homology between human and rhesus macaque TNFRII protein (less than 85%). The amino acid sequence of TNFRII protein in human and rhesus macaque is very similar (percent identity matrix of 95.88%).
TNFRII induces apoptosis. TNFRII does not directly engage the apoptotic program, but relies on the induction of endogenous, membrane-bound TNF, which subsequently activates TNFRI. TNFRII stimulates the action of the endogenously produced membrane-bound TNF on TNFRI is drastically enhanced. TNFRII competes with TNFRI for the recruitment of newly synthesized TRAF2-bound anti-apoptotic factors, thereby promoting the formation of a caspase-8-activating TNFRI complex. TNFRII competes with TNFRI 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 TNFRI signalling complex, but would switch to a net proapoptotic function upon recruitment into the TNFRII signalling complex[1][2][3].

REFERENCES

[1]. Wajant H, et, al. Tumor necrosis factorsignaling. Cell Death Differ. 2003 Jan;10(1):45-65.

[2]. Fotin-Mleczek M, et, al. Apoptoticcrosstalk of TNF receptors: TNF-R2-induces depletion of TRAF2 and IAP proteinsand accelerates TNF-R1-dependent activation of caspase-8. J Cell Sci. 2002 Jul1;115(Pt 13):2757-70.

[3]. Masli S, et, al. Anti-inflammatory effectsof tumour necrosis factor (TNF)-alpha are mediated via TNF-R2 (p75) intolerogenic transforming growth factor-beta-treated antigen-presenting cells.Immunology. 2009 May;127(1):62-72.

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