

TNFRSF1A Protein, Rat (HEK293, Fc)

Cat. No.:	HY-P74505
Synonyms:	Tumor necrosis factor receptor superfamily member 1A; CD120a; TNF-R1; TNFRSF1A
Species:	Rat
Source:	HEK293
Accession:	P22934 (M1-A211)
Gene ID:	25625
Molecular Weight:	Approximately 59 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>TNFRSF1A (TNF RI) protein is a single-pass type I membrane protein belonging to the tumor necrosis factor (TNF) family. TNFRSF1A is the major signaling receptor for TNF-α. TNFRSF1A protein is a multifunctional cytokine, which is synthesized by almost all cells^{[1][2]}.</p> <p>The sequence of amino acids in TNFRSF1A from different species is very different (less than 85% similarity among human, rat and mouse).</p> <p>TNFRSF1A contains a protein-protein interaction domain, called death domain (DD), can recruit other DD-containing proteins and couples the death receptors to caspase activation and apoptosis. Both soluble and membrane-bound forms of the cytokine can activate TNFRSF1A. TNFRSF1A induces cellular inflammatory damage and apoptosis by participating in mTOR, JNK, IKK, caspase 3, MAPK, and NF-κB pathways^{[1][3][4]}.</p>
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REFERENCES

[1]. WajantH, et, al. Tumor necrosis factor signaling. Cell Death Differ. 2003Jan;10(1):45-65.

[2]. Fu Q, et, al. miR-29a up-regulation in AR42J cells contributes to apoptosis viatargeting TNFRSF1A gene. World J Gastroenterol. 2016 May 28;22(20):4881-90.

[3]. Zhou S, et, al. Bioinformatics AnalysisIdentifies TNFRSF1A as a Biomarker of Liver Injury in Sepsis TNFRSF1A is aBiomarker for Septic Liver Injury. Genet Res (Camb). 2022 Oct 15;2022:1493744.

[4]. EgusquiagirreSP, et, al. The STAT3 Target Gene TNFRSF1A Modulates the NF-κB Pathway inBreast Cancer Cells. Neoplasia. 2018 May;20(5):489-498.

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