# TNFRSF1A Protein, Human (CHO)

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| **Cat. No.:** | HY-P7305 |
| **Synonyms:** | rHuTNFRI; TNFRSF1A; TNFAR; CD120a |
| **Species:** | Human |
| **Source:** | CHO |
| **Accession:** | P19438-1 (D41-N201) |
| **Gene ID:** | 7132 |
| **Molecular Weight:** | 28-35 kDa |

## PROPERTIES

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| **AA Sequence** | D S V C P Q G K Y I H P Q N N S I C C T K C H K G T Y L Y N D C P G P G Q D T D<br>C R E C E S G S F T A S E N H L R H C L S C S K C R K E M G Q V E I S S C T V D<br>R D T V C G C R K N Q Y R H Y W S E N L F Q C F N C S L C L N G T V H L S C Q E<br>K Q N T V C T C H A G F F L R E N E C V S C S N C K K S L E C T K L C L P Q I E<br>N |
| **Biological Activity** | The $ED_{50}$ is <50 ng/mL as measured by 929 cells. |
| **Appearance** | Lyophilized powder. |
| **Formulation** | Lyophilized after extensive dialysis against PBS. |
| **Endotoxin Level** | <0.2 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

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| **Background** | 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].<br>The sequence of amino acids in TNFRSF1A from different species is very different (less than 85% similarity among human, rat and mouse). |

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].

## REFERENCES


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

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

[5]. Palladino MA, et al. Anti-TNF-alpha therapies: the next generation. Nat Rev Drug Discov. 2003 Sep;2(9):736-46.





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