

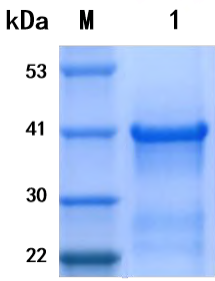


Human Tumor necrosis factor alpha (TNF- α) Protein, Recombinant

I. For sale

Product name	Catalog #	Size
Human Tumor necrosis factor alpha (TNF- α) Protein, Recombinant	P01T0007	10ug
		50ug
		100ug
		1mg

II. Product Description

Other Names	DIF; TNFA; TNFSF2; TNLG1F; TNF-alpha
Protein & NCBI Number	P01375, NM_000594.4
Host	E.coli
Express Region	1-233aa
Protein Length	Total length of the protein (including Tag)
Protein Sequence	MSTESMIRDVELAEEALPKKTGGPQGSRRCLFLSLFSLIVAGA TTLFCLLHFGVIGPQREEFPRLSLISPLAQAVRSSRTPSDKPVAVHVVANPQAEQQL QWLNRRANALLANGVELRDNLVVPSEGLYLIYSQVLFKGGQCPSTHLLTHTISRIA VSYQTKVNLLSAIKSPCQRETPEGAEAKPWYEPIYLGGVFQLEKGDRLSAEINRPDYL DFAESGQVYFGIAL
Molecular Weight	about 25.6kDa
Fusion Tag	6xHis-SUMO (N-terminus)
Purity	$\geq 95\%$ SDS-PAGE
Physical Property	liquid or lyophilized powder
Reconstitution	Storage solution: We recommend using PBS or a suitable solvent according to the experimental requirements to prepare 1mg/mL storage solution, aliquot and store at -20 °C. Working solution: According to the experimental requirement, dilute Storage solution. The working solution can be stored at 4°C for 2-3 weeks after dilution.
Storage & Stability	The shelf life of liquid form is 6 months stored at -20 °C /-80 °C. The shelf life of lyophilized form is 12 months stored at -20 °C /-80 °C.
Applications	Antibody preparation, immunoassay (ELISA, WB), subcellular localization and interaction protein identification, etc.
Lead Time	5 to 10 business days; 2 to 3 days for stock products
Figure. SDS-PAGE	 <p>Bis-Tris (MOPS) SDS-PAGE</p>



III. Storage and Transportation

Product is stable for up to twelve months from date of receipt under sterile conditions at -20°C to -80°C . For optimal storage the lyophilized powder and protein stock solution should be aliquoted, and avoid freeze-thaw cycles.

IV. Background

TNF- α (tumor necrosis factor) gene encodes a multifunctional proinflammatory cytokine that belongs to the tumor necrosis factor (TNF) superfamily. This cytokine is mainly secreted by macrophages. It can bind to, and thus functions through its receptors TNFRSF1A/TNFR1 and TNFRSF1B/TNFR2. This cytokine is involved in the regulation of a wide spectrum of biological processes including cell proliferation, differentiation, apoptosis, lipid metabolism, and coagulation. This cytokine has been implicated in a variety of diseases, including autoimmune diseases, insulin resistance, psoriasis, rheumatoid arthritis ankylosing spondylitis, tuberculosis, autosomal dominant polycystic kidney disease, and cancer. Mutations in this gene affect susceptibility to cerebral malaria, septic shock, and Alzheimer disease. Knockout studies in mice also suggested the neuroprotective function of this cytokine.

V. References

1. Torrey Heather, Butterworth John, Mera Toshiyuki, Okubo Yoshiaki, Wang Limei, Baum Danielle, Defusco Audrey, Plager Sara, Warden Sarah, Huang Daniel, Vanamee Eva, Foster Rosemary, Faustman Denise L. Targeting TNFR2 with antagonistic antibodies inhibits proliferation of ovarian cancer cells and tumor-associated Tregs. *Sci Signal*. 2017;10(462):eaaf8608.
2. Park Young-Hoon, Jeong Mi Suk, Jang Se Bok. Structural insights of homotypic interaction domains in the ligand-receptor signal transduction of tumor necrosis factor (TNF). *BMB Rep*. 2016 Mar;49(3):159-66.
3. Jongseok Lee, Jami L. Saloman, Gustave Weiland, Q-Schick Auh, Man-Kyo Chung, Jin Y. Ro. Functional interactions between NMDA receptors and TRPV1 in trigeminal sensory neurons mediate mechanical hyperalgesia in the rat masseter muscle. *Pain*. 2012 Jul;153(7):1514-1524.
4. Lucía Cabal-Hierro, Pedro S. Lazo. Signal transduction by tumor necrosis factor receptors. *Cell Signal*. 2012 Jun;24(6):1297-305.
5. AGGARWAL, NATARAJAN B B K. Tumor necrosis factors: Developments during the last decade. *Eur Cytokine Netw*, 1996, 7 (2) : 93-124.