For Research Use Only

Recombinant Human TNF-alpha (His Tag)

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Catalog Number: Eg0816

Basic Information

ED50:
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Species:
Human

Purity:
>90 %, SDS-PAGE

GeneID:
7124

Accession:
P01375

Technical Specifications

Purity:
>90 %, SDS-PAGE

Endotoxin Level:
<1.0 EU/ μ g protein, LAL method

Source:
HEK293-derived Human TNF-alpha protein Val77-Leu233 (Accession# P01375) with a His Tag at the C-terminus.

Predicted Molecular Mass:
18.2 kDa

SDS-PAGE:
15-25 kDa, reducing (R) conditions

Formulation:
Lyophilized from sterile PBS, pH 7.4. Normally 5% trehalose and 5% mannitol are added as protectants before lyophilization.

Biological Activity

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Storage and Shipping

Storage:
It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

- Until expiry date, -20℃ to -80℃ as lyophilized proteins.
- 3 months, -20℃ to -80℃ under sterile conditions after reconstitution.

Shipping:
The product is shipped at ambient temperature. Upon receipt, store it immediately at the recommended temperature.

Reconstitution

Briefly centrifuge the tube before opening. Reconstitute at 0.1-0.5 mg/mL in sterile water.

Background

TNF, as also known as TNF-alpha, or cachectin, is a multifunctional proinflammatory cytokine that belongs to the tumor necrosis factor (TNF) superfamily. It is expressed as a 26 kDa membrane bound protein and is then cleaved by TNF-alpha converting enzyme (TACE) to release the soluble 17 kDa monomer, which forms homotrimers in circulation. It is produced chiefly by activated macrophages, although it can be produced by many other cell types such as CD4+ lymphocytes, NK cells, neutrophils, mast cells, eosinophils, and neurons. It can bind to, and thus functions through its receptors TNFRSF1A/TNFR1 and TNFRSF1B/TNFBR. This cytokine is involved in the regulation of a wide spectrum of biological processes including cell proliferation, differentiation, apoptosis, lipid metabolism, and coagulation. Dysregulation of TNF production has been implicated in a variety of human diseases including Alzheimer's disease, cancer, major depression and inflammatory bowel disease (IBD).

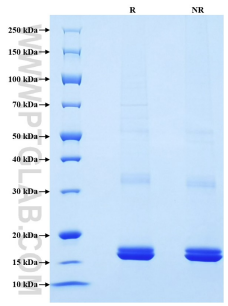
References

1.F Buchegger. et al. (1984). Int J Cancer. 33(5):643-649.
2.Linshu Zhao. et al. (2004). Br J Haematol. 125(5):666-673.
3.M Kuroki. et al. (2001). J Leukoc Biol. 70(4):543-550.
4.S Oikawa. et al. (1991). J Biol Chem. 266(13):7995-8001.
5.T Yamanka. et al. (1996). Biochem Biophys Res Commun.219(3):842-847.

Synonyms

C-domain 1, C-domain 2, Intracellular domain 1, Intracellular domain 2, TNF, TNF a, TNF alpha, TNF alpha,TNF-a,TNF-alpha,TNF α, TNFA, TNF-a, TNF-alpha, TNFSF2, TNF α, TNF- α, Tumor necrosis factor, Tumor necrosis factor ligand superfamily member 2, Tumor necrosis factor, membrane form, Tumor necrosis factor, soluble form

Selected Validation Data



Purity of Recombinant Human TNF-alpha was determined by SDS-PAGE. The protein was resolved in an SDS-PAGE in reducing (R) and non-reducing (NR) conditions and stained using Coomassie blue.