

For Research Use Only

Recombinant Rat TNF-alpha protein (rFc Tag)



Catalog Number: Eg3800

Basic Information	Species: Rat	Purity: >90 %, SDS-PAGE	Tag: rFc Tag
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Technical Specifications

Purity:
>90 %, SDS-PAGE

Endotoxin Level:
<0.1 EU/μg protein, LAL method

Source:
HEK293-derived Rat TNF-alpha protein Leu80-Leu235 (Accession# P16599) with a rabbit IgG Fc tag at the C-terminus.

GeneID:
24835

Accession:
P16599

Predicted Molecular Mass:
43.5 kDa

SDS-PAGE:
40-48 kDa, reducing (R) conditions

Formulation:
Lyophilized from 0.22 μm filtered solution in PBS, pH 7.4. Normally 5% trehalose and 5% mannitol are added as protectants before lyophilization.

Biological Activity

Not tested

Storage and Shipping

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

- Until expiry date, -20°C to -80°C as lyophilized proteins.
- 3 months, -20°C to -80°C 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/TNFR2. This cytokine is involved in the regulation of a wide spectrum of biological processes including cell proliferation, differentiation, apoptosis, lipid metabolism, and coagulation. rat and human TNF-alpha share 79% amino acid sequence identity. Unlike human TNF-alpha, the rat form is glycosylated. In rat deficiency of this gene is associated with defects in response to bacterial infection, with defects in forming organized follicular dendritic cell networks and germinal centers, and with a lack of primary B cell follicles.

References

1. Agbanoma G. et al. (2012) J Immunol. 188: 1307-17.
2. Kriegler M. et al. (1988) Cell. 53: 45-53.
3. Theiss AL. et al. (2005) J Biol Chem. 280: 36099-109.
4. Swardfager W. et al. (2010) Biol Psychiatry. 68:930-41.
5. Locksley RM. et al. (2001) Cell. 104(4):487-501.

Synonyms

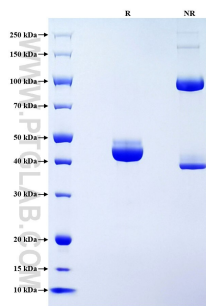
Tnf, TNF-alpha, Cachectin, TNF alpha, TNF alpha, TNF-a, TNF-alpha, TNFa

For technical support and original validation data for this product please contact

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Selected Validation Data



Purity of Recombinant Rat 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.