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Recombinant human TNF-alpha protein (Qk083)



Type: Stem cells

Available for purchase: Unit Size (µg): 25, 50, 100, 500, 1000

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Product Information

Tumor necrosis factor-alpha (TNF-α) is a cytokine involved in cell signaling, primarily produced by immune cells like macrophages. It plays a central role in inflammation, immunity, and regulating cell survival and death.

Human TNF-α has a molecular weight of 17.3 kDa, animal origin-free, carrier-free and protein tag-free to ensure its purity with exceptional lot-to-lot consistency. Qk083 TNF-alpha is suitable for the culture of reproducible and high-quality hematopoietic stem cells and other relevant cells.

This protein is also available as GMP compliant Cell Therapy Grade, to enquire email support@qkine.com.

Alternative protein names

TNF-alpha, Tumor necrosis factor ligand superfamily member 2, Cachectin, TNFa, TNF a, Qk83

Molecular weight

17.3 kDa (non-covalent trimer)

Protein Uniprot number

High purity human TNF-α protein (Uniprot: P01375)

Species reactivity

- human

- species similarity:
- mouse - 78%
- rat - 78%
- bovine - 79%
- porcine - 86%

Product Information

- >98%, by SDS-PAGE quantitative densitometry
- Expressed in *E. coli*
- Animal origin-free (AOF) and carrier protein-free
- Manufactured in our Cambridge, UK laboratories
- Lyophilized from Tris, NaCl

Reconstitution instructions

- Resuspend in sterile-filtered water at >50 µg/ml

Featured applications

- Immunoregulatory function
- Autoimmune disease research

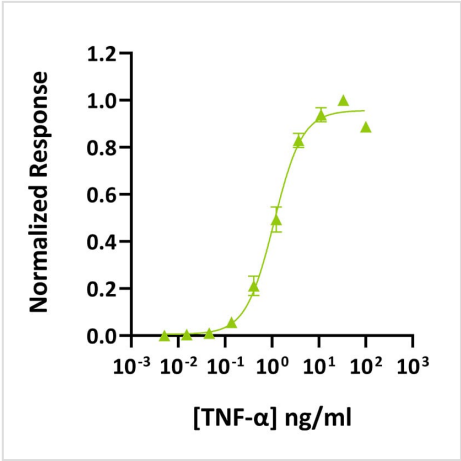
Further quality assays

- Mass spectrometry: single species with expected mass
- Recovery from stock vial: >95%
- Endotoxin: <0.05 EU/µg protein

Scientific Information

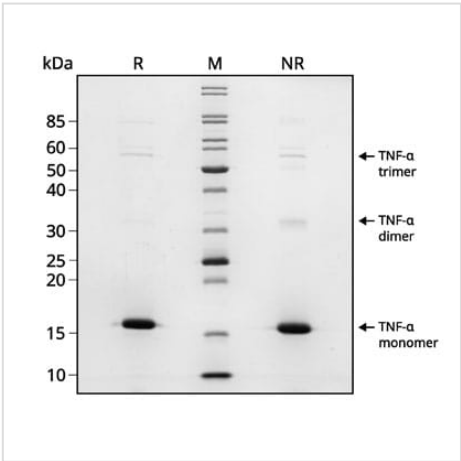
Bioactivity

TNF-α activity was determined using the TNF-α-responsive firefly luciferase reporter assay. Transfected HEK293T cells were treated in triplicate with a serial dilution of TNF-α for 3 hours. Firefly luciferase activity was measured and normalised to the control Renilla luciferase activity. Data from Qk083 lot #204609. EC50 = 1.1 ng/ml (63 pM).



Purity

Recombinant TNF-α migrates as a major band at approximately 17 kDa (monomer) in reduced (R) and non-reduced (NR) conditions. The dimeric and trimeric forms are also observed at approximately 33 and 55 kDa, respectively. No contaminating protein bands are present.The purified recombinant protein (3 µg) was resolved using 15% w/v SDS-PAGE in reduced (+β-mercaptoethanol, R) and non-reduced (NR) conditions and stained with Coomassie Brilliant Blue R250. Data from Qk083 lot #204609.



Original product page: https://qkine.com/product/recombinant-human-tnf-alpha-protein-qk083/

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