

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 ryan.weber@matriq.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

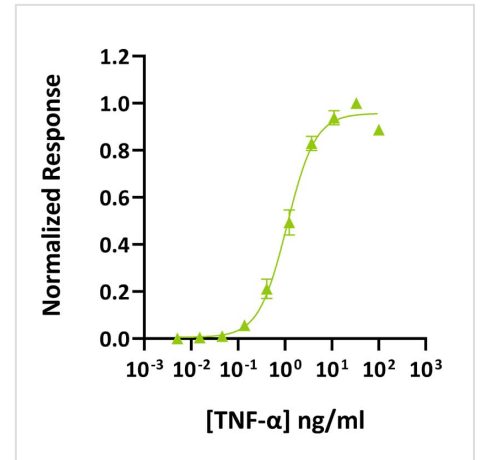
Further quality assays

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

Scientific Information

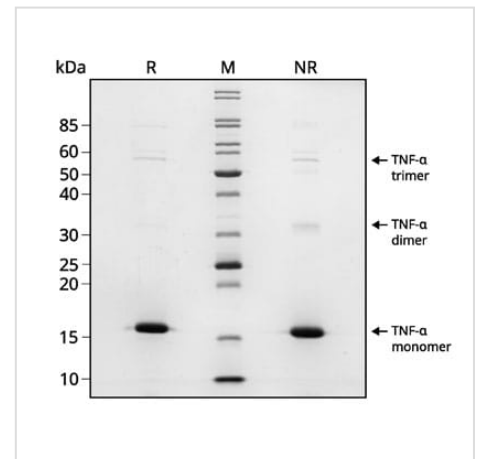
Bioactivity

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 μ g) 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://ryan.calliope-alpha.ts.net/product/recombinant-human-tnf-alpha-protein-qk083/>

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