

Recombinant Human Tumor Necrosis Factor-alpha (rHu TNF- α)

Lyophilized (25 μ g) Cat # AK9887-0025 | Lyophilized (50 μ g) Cat # AK9887-0050

P 1

Product Description:

Akron's Recombinant Human Tumor Necrosis Factor-alpha (rHu TNF- α) product is manufactured following all relevant cGMP guidelines for ancillary materials. Akron's rHu TNF- α is a glycosylated cytokine analog expressed in Yeast. Its active form is a homo-trimer with subunit molecular weights of approximately 17.4 kDa. The lyophilized product is packaged into vials and available in 25 μ g and 50 μ g aliquots as listed above. *In vivo*, TNF- α is an endogenous pyrogen that can induce fever and apoptosis. There are both soluble and bound forms of TNF- α , and there are two different receptors that it can use to signal. This allows it to act in one of two opposite ways; it can be pro-inflammatory inducing apoptosis, or anti-inflammatory inducing proliferation. TNF- α is produced by a wide array of cell types in the body and causes a myriad of responses. Akron's cGMP-compliant rHu TNF- α can be used to promote *ex vivo* responses from B cells, natural killer (NK) cells, neutrophils, hematopoietic stem cells (HSCs), hematopoietic progenitors, endothelial cells, and neurons.

Product Features:

Manufacturing

- Yeast expression system
- Negligible BSE/TSE risk from all media components
- Low Endotoxin (< 1 EU/ μ g)
- High Purity (\geq 97%)

Quality

- Relevant cGMP guidelines used in manufacture, testing, and release
- USP <1043>, Ancillary Materials for Cell, Gene, and Tissue-Engineered Products
- ISO 13485:2016, Medical Devices - Quality Management Systems - Requirements for Regulatory Purposes
- ISO/TS 20399-1-3:2018, Biotechnology - Ancillary Materials Present During the Production of Cellular Therapeutic Products

Release Testing:

- Appearance
- Specific Activity
- Purity (Non-Reducing SDS-PAGE)
- Purity (Reducing SDS-PAGE)
- Bacterial Endotoxins



Recombinant Human Tumor Necrosis Factor-alpha (rHu TNF- α)

Lyophilized (25 μ g) Cat # AK9887-0025 | Lyophilized (50 μ g) Cat # AK9887-0050

P 2

Stability:

- 36-month shelf-life
- Store at -20 °C
- Transport on cold packs

Reconstitution:

Reconstitute the lyophilized product with 0.2 mL of sterile water. This reconstituted solution can be stored at 2 °C to 8 °C for one month and at -20 °C for three months without loss of activity. Avoid repeated freeze-thaw cycles.

For Use Statement:

For research use or further manufacturing use in *ex vivo* cell therapy applications. This product is not intended for direct *in vivo* use or for direct clinical use as a drug, therapeutic, biologic, or medical device.

Related Products:

Catalog Number	Product Name	Size
AK9879-0100	Recombinant Human Stem Cell Factor (rHu SCF)	100 μ g
AK9836-0100	Recombinant Human Interleukin-3 (rHu IL-3)	100 μ g
AK9841-0100	Recombinant Human Interleukin-6 (rHu IL-6)	100 μ g
AK8248-0300	Recombinant Human Granulocyte-Colony Stimulating Factor (rHu G-CSF) Solution	300 μ g
AK8341-0150	Recombinant Human Granulocyte Macrophage-Colony Stimulating Factor (rHu GM-CSF)	150 μ g

For more information on our available products or for technical assistance, see contact info below.
For contract orders under master supply agreement, please inquire.