

## Recombinant Human Interleukin-4 (rHu IL-4)

Lyophilized (10 µg) Cat # AK9839-0010 | Lyophilized (30 µg) Cat # AK9839-0030 | Lyophilized (100 µg) Cat # AK9839-0100

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### Product Description:

Akron's Recombinant Human Interleukin-4 (rHu IL-4) product is manufactured following all relevant cGMP guidelines for ancillary materials. Akron's rHu IL-4 is a single chain, 30 kDa, glycosylated cytokine analog expressed in Yeast, containing 129 amino acids. The lyophilized product is packaged into vials. *In vivo*, IL-4 is a key regulator of humoral and adaptive immunity and is well known for stimulating the differentiation of T helper cells from naive T cells and stimulating the growth and differentiation of B cells. This diverse cytokine has two receptor complexes in which it interacts with; the hematopoietic receptor shares an identical subunit as the IL-2, IL-7, IL-15, and IL-21 receptor proteins, while the non-hematopoietic receptor is known to transduce IL-13 mediated signals in addition to IL-4. Akron's cGMP-compliant rHu IL-4 can be used to promote the *ex vivo* activation of and class switching behavior of B cells, stimulate T helper cell differentiation, and promote the proliferation and activation of epithelial cells.

### Product Features:

#### Active Substance

- Negligible BSE/TSE risk from all media components
- Low Endotoxin (< 1 EU/µg)
- High Purity (≥ 97%)

#### Manufacturing

- Yeast expression system
- Tag-free purification

#### 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

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### Release Testing:

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

### Stability:

- 36-month shelf life
- Store at -20 °C
- Transport with 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 only. 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   |
|----------------|--|--------|
| AK8223-0100    | Recombinant Human Interleukin-2 (rHu IL-2)   | 100 µg |
| AK9842-0040    | Recombinant Human Interleukin-7 (rHu IL-7)   | 40 µg  |
| AK9823-0040    | Recombinant Human Interleukin-15 (rHu IL-15) | 40 µg  |
| AK9833-0040    | Recombinant Human Interleukin-21 (rHu IL-21) | 40 µg  |

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