

Catalog Number: Eg1113

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

&gt;90 %, SDS-PAGE

**Endotoxin Level:**

&lt;0.1 EU/ µg protein, LAL method

**Source:**

HEK293-derived Rat IL-4 protein Cys25-Ser147 (Accession# P20096) with a His tag at the C-terminus.

**GeneID:**

287287

**Accession:**

P20096

**Predicted Molecular Mass:**

14.8 kDa

**SDS-PAGE:**

16-20 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**

Interleukin-4 (IL-4), a member of the α-helical cytokine family, is produced by activated CD4<sup>+</sup> T cells, basophils, and mast cells. It promotes the proliferation and differentiation of antigen presenting cells. IL-4 also plays a pivotal role in antibody isotype switching and stimulates the production of IgE. This cytokine has been applied in the treatment of autoimmune disorder like multiple myeloma, cancer, psoriasis, and arthritis. IL-4 has also been extensively applied to inhibit detrimental effect of Th1. It may promote the growth of epithelial tumors by mediating increased proliferation and survival.

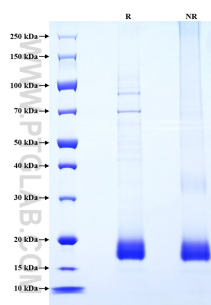
**References**

1. Bao K, et al. (2015) Cytokine 75, 25-37.
2. Zhu J, et al. (2015) Cytokine 75, 14-24.
3. Kelly-Welch A, et al. (2005) Sci. Signal. 2005, cm9.
4. Dhanda SK, et al. (2013) Clin dev immunol. 2013:263952.
5. Leberman DA, et al. (1988) J EXP MED. 168(3):853-62.
6. Pillai MR, et al. (2011) Growth factors. 29(4):153-60.

**Synonyms**

B-cell growth factor 1, B-cell IGG differentiation factor, B-cell stimulatory factor 1, BSF-1, IL4

## Selected Validation Data



Purity of Recombinant Rat IL-4 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.

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

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