

# Recombinant Human Interleukin-4/IL-4 Protein

Catalog Number: PKSH032650

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

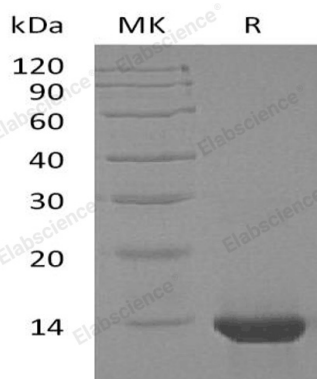
## Description

|                     |   |
|---------------------|---|
| <b>Species</b>      | Human   |
| <b>Mol_Mass</b>     | 15.9 kDa  |
| <b>Accession</b>    | P05112  |
| <b>Bio-activity</b> | Measure by its ability to induce TF-1 cells proliferation. The ED <sub>50</sub> for this effect is <0.2 ng/mL. The specific activity of recombinant human IL-4 is approximately >2.8 x 10 <sup>7</sup> IU/mg. |

## Properties

|                       |  |
|-----------------------|--|
| <b>Purity</b>         | > 98 % as determined by reducing SDS-PAGE.   |
| <b>Endotoxin</b>      | < 0.1 EU per µg of the protein as determined by the LAL method.  |
| <b>Storage</b>        | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 °C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months. |
| <b>Shipping</b>       | This product is provided as lyophilized powder which is shipped with ice packs.  |
| <b>Formulation</b>    | Lyophilized from sterile PBS, pH 8.0.<br>Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.<br>Please refer to the specific buffer information in the printed manual.             |
| <b>Reconstitution</b> | Please refer to the printed manual for detailed information.   |

## Data



> 98 % as determined by reducing SDS-PAGE.

## Background

Interleukin-4 (IL-4) is a pleiotropic cytokine that regulates diverse T and B cell responses including cell proliferation; survival and gene expression. IL-4 is produced by mast cells; T cells; and bone marrow stromal cells. IL-4 regulates the differentiation of naive CD4<sup>+</sup> T cells into helper Th2 cells; characterized by their cytokine-secretion profile that includes secretion of IL-4; IL-5; IL-6; IL-10; and IL-13; which favor a humoral immune response. Another dominant function of IL-4 is the regulation of immunoglobulin class switching to the IgG1 and IgE isotypes. Excessive IL-4 production by Th2 cells has been associated with elevated IgE production and allergic response.

## For Research Use Only