

## Recombinant Human Interleukin-4/IL-4 Protein

**Catalog Number:** PKSH033456

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

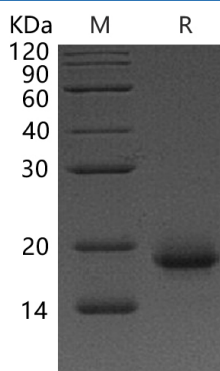
### Description

<b>Species</b>	Human
<b>Source</b>	HEK293 Cells-derived Human Interleukin-4/IL-4 protein His25-Ser153
<b>Calculated MW</b>	15.0 kDa
<b>Observed MW</b>	18 kDa
<b>Accession</b>	P05112
<b>Bio-activity</b>	Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The ED <sub>50</sub> for this effect is 0.01-0.05 ng/ml.

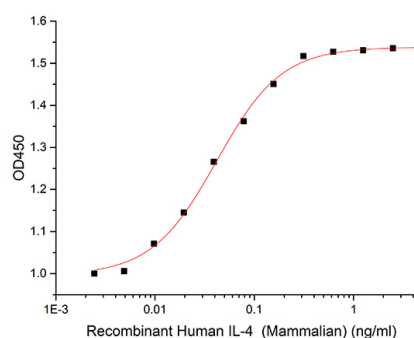
### Properties

<b>Purity</b>	> 95 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 0.01 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 a 0.2 µm filtered solution of 20mM PB, 150mM NaCl, pH 7.4. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
	Please refer to the specific buffer information in the printed manual.
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

### Data

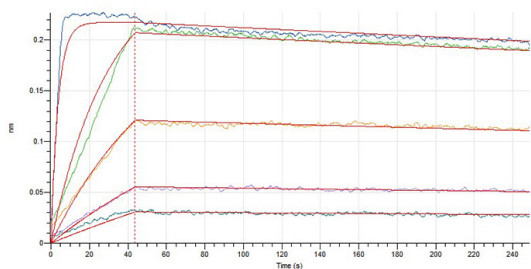


> 95 % as determined by reducing SDS-PAGE.



Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The ED<sub>50</sub> for this effect is 0.01-0.05 ng/ml.

### For Research Use Only



Loaded Cynomolgus IL-4RA-His(PKSQ050053) on HIS1K Biosensor, can bind Human IL-4(PKSH033456) with an affinity constant of 0.33 nM as determined in BLI assay.

## 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.