

Product Information

Catalog Number	KD-057
Species	Human
Protein Construction	IL-4 (His25-Ser153), Accession # P05112-1
Tag	C-terminal 8-His tag
Expression System	HEK 293
Purity	> 95% as determined by SDS-PAGE
Predicted Molecular Mass	15 kDa
SDS-PAGE	18.4 kDa, under reducing conditions
Endotoxin	<0.1 EU/μg of the protein by the LAL method
Biological Activity	Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The ED50 for this effect is 0.05-0.35 ng/mL.
Formulation	Lyophilized from a 0.22μm filtered solution in PBS
Reconstitution	It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder at 100 μg/mL in sterile deionized water
Storage & Stability	Use a manual defrost freezer and avoid repeated freeze-thaw cycles 12 months from date of receipt, at lower than -70 °C as supplied 1 week, 2 to 8 °C under sterile conditions after reconstitution 1 month, -20 to -70 °C under sterile conditions after reconstitution
Usage	Research use only

Product Data

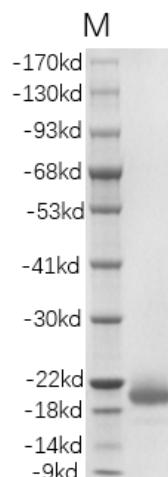


Figure 1. SDS-PAGE analysis with 2 μ g recombinant human IL-4 per lane, under reducing conditions, showing bands at 18.4 kDa

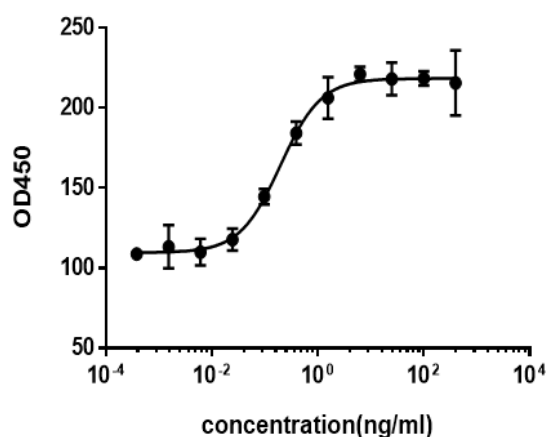


Figure 2. Biological activity measured in a cell proliferation assay using TF-1 cells, ED50 for this effect is 0.05-0.35 ng/mL

Background

Interleukin-4 (IL-4) is a pleiotropic cytokine regulates diverse T and B cell responses including cell proliferation, survival, and gene expression. It has important effects on the growth and differentiation of different immunologically competent cells. Interleukin-4 is produced by mast cells, T cells, and bone marrow stromal cells. IL-4 regulates the differentiation of native CD4⁺ T cells (Th0 cells) into helper Th2 cells, and regulates the immunoglobulin class switching to the IgG1 and IgE isotypes. IL-4 has numerous important biological functions including stimulating B-cells activation, T-cell proliferation and CD4⁺ T-cells differentiation to Th2 cells. It is a key regulator in hormone control and adaptive immunity. IL-4 also plays a major role in inflammation response and wound repair via activation of macrophage into M2 cells.