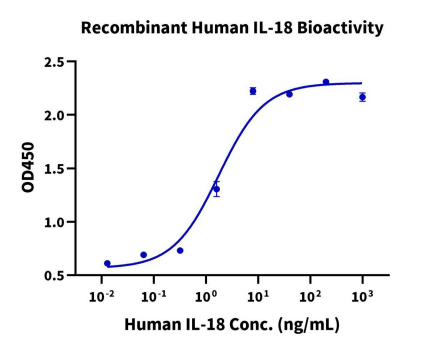
Bioactive

# IL18 (Human) Recombinant Protein

Catalog # P10667 Size 100 ug

## Applications




### Functional Study

Measured by its ability to induce Interferon gamma secretion by human natural killer lymphoma NK-92 cells. The $ED_{50}$-for this effect is 1-5 ng/mL (QC Test).

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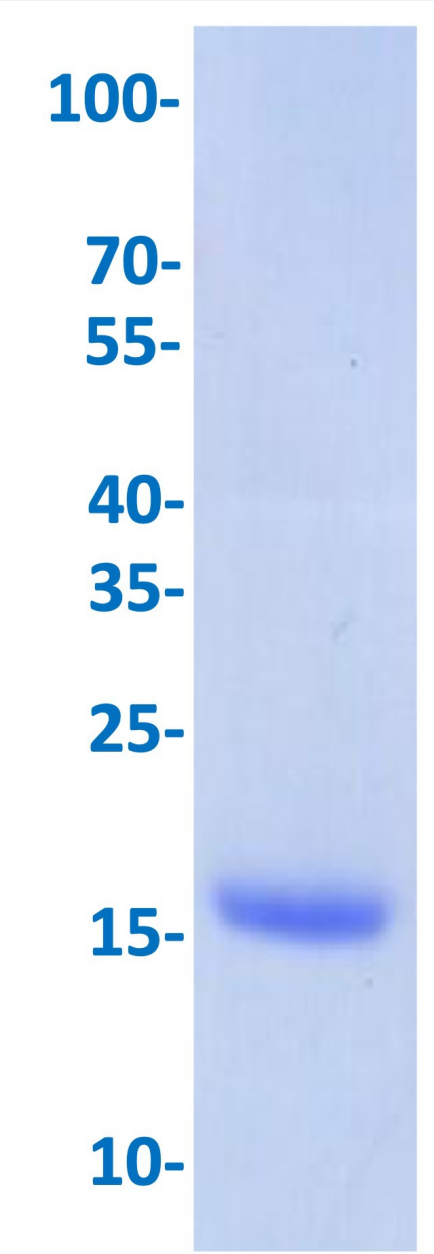
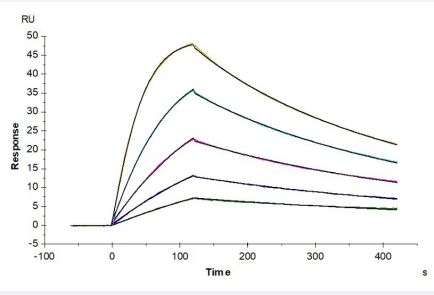



## SDS-PAGE

Human IL18 on Bis-Tris PAGE under reduced condition. The purity is greater than 95%.




## Surface Plasmon Resonance

Human IL18 R1, His Tag captured on CM5 Chip via anti-his antibody can bind Human IL18, No Tag with an affinity constant of 2.38 nM as determined in SPR assay (Biacore T200).

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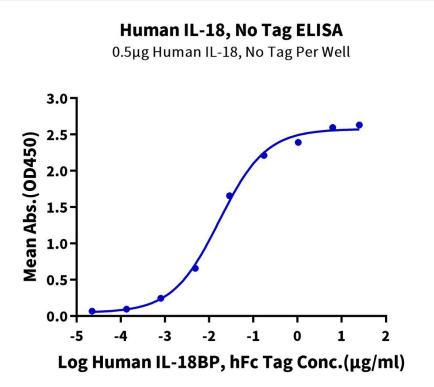
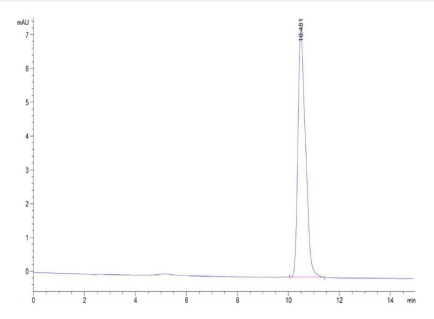



## ELISA

Immobilized Human IL18 at 5 ug/mL (100 uL/well) on the plate. Dose response curve for Human IL18BP, hFc Tag with the $EC_{50}$ of 16.9 ng/mL determined by ELISA (QC Test).



## HPLC

The purity of Human IL18 is greater than 95% as determined by SEC-HPLC.

## Specification

| | |
|---|---|
| **Product Description** | Human IL18 (Q14116, Tyr37-Asp193) partial recombinant protein expressed in *Escherichia coli*. |
| **Sequence** | Tyr37-Asp193 |
| **Host** | Escherichia coli |
| **Theoretical MW (kDa)** | 18.2 |
| **Reactivity** | Human |
| **Form** | Lyophilized |
| **Preparation Method** | *Escherichia coli* expression system |
| **Purity** | > 95% by Tris-Bis PAGE<br>> 95% by HPLC |
| **Endotoxin Level** | < 0.1 EU per 1 ug as determined by the LAL method. |
| **Activity** | The $EC_{50}$ of 16.9 ng/mL determined by ELISA.<br>The affinity constant of 2.38 nM as determined in SPR assay. |

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| | |
|---|---|
| **Recommend Usage** | Biological Activity<br>ELISA<br>Tris-Bis PAGE<br>SEC-HPLC<br>The optimal working dilution should be determined by the end user. |
| **Storage Buffer** | Lyophilized from 0.22um filtered solution in 20mM PB, 250mM NaCl, 50mM L-arginine (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization. |
| **Storage Instruction** | Store at -20°C for 12 months.<br>After reconstitution, store at -80°C for 3 months.<br>Aliquot to avoid repeated freezing and thawing. |

## Applications

- Functional Study

  Measured by its ability to induce Interferon gamma secretion by human natural killer lymphoma NK-92 cells. The $ED_{50}$-for this effect is 1-5 ng/mL (QC Test).

- Enzyme-linked Immunoabsorbent Assay

- SDS-PAGE

  Human IL18 on Bis-Tris PAGE under reduced condition. The purity is greater than 95%.

- Surface Plasmon Resonance

  Human IL18 R1, His Tag captured on CM5 Chip via anti-his antibody can bind Human IL18, No Tag with an affinity constant of 2.38 nM as determined in SPR assay (Biacore T200).

## Gene Info — IL18

| | |
|---|---|
| **Entrez GeneID** | 3606 |
| **Protein Accession#** | Q14116 |
| **Gene Name** | IL18 |
| **Gene Alias** | IGIF, IL-18, IL-1g, IL1F4, MGC12320 |
| **Gene Description** | interleukin 18 (interferon-gamma-inducing factor) |
| **Omim ID** | 600953 |
| **Gene Ontology** | Hyperlink |

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| | |
|---|---|
| **Gene Summary** | The protein encoded by this gene is a proinflammatory cytokine. This cytokine can induce the IFN-gamma production of T cells. The combination of this cytokine and IL12 has been shown to inhibit IL4 dependent IgE and IgG1 production, and enhance IgG2a production of B cells. IL-18 binding protein (IL18BP) can specifically interact with this cytokine, and thus negatively regulate its biological activity. [provided by RefSeq |
| **Other Designations** | IL-1 gamma\|interferon-gamma-inducing factor\|interleukin 18\|interleukin-1 gamma\|interleukin-18 |

## Pathway

- Cytokine-cytokine receptor interaction

## Disease

- Abortion
- Acute Lung Injury
- Adenocarcinoma
- Aggressive Periodontitis
- Alzheimer disease
- Arthritis
- Asthma
- Atherosclerosis
- Atrial Fibrillation
- Autoimmune Diseases
- Behcet Syndrome
- Brain Ischemia
- Breast cancer
- Breast Neoplasms
- Bronchial Hyperreactivity
- Bronchiolitis

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- Carcinoma
- Cardiovascular Diseases
- Celiac Disease
- Chorioamnionitis
- Choriocarcinoma
- Choroidal Neovascularization
- Chronic Periodontitis
- Cognition Disorders
- Colitis
- Colorectal Neoplasms
- Connective Tissue Diseases
- Coronary Artery Disease
- Coronary Disease
- Crohn Disease
- Death
- Dermatitis
- Diabetes Complications
- Diabetes Mellitus
- Disease Progression
- Duodenal Ulcer
- Dyspepsia
- Edema
- Endometriosis
- Endotoxemia
- Epstein-Barr Virus Infections
- Esophageal Neoplasms

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- Fetal Diseases
- Fetal Membranes
- Gastrointestinal Neoplasms
- Genetic Predisposition to Disease
- Giant Cell Arteritis
- Gingivitis
- Glomerulonephritis
- Graft vs Host Disease
- Graves Disease
- Graves Ophthalmopathy
- Head and Neck Neoplasms
- Heart Diseases
- Helicobacter Infections
- Hematologic Diseases
- Hemophilia A
- Hepatitis B
- Hepatitis C
- HIV Infections
- HIV-Associated Lipodystrophy Syndrome
- Hodgkin Disease
- Hydatidiform Mole
- Hypersensitivity
- Hypertension
- Infant
- Infection
- Inflammation

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- Inflammatory Bowel Diseases
- Insulin Resistance
- Intracranial Arteriosclerosis
- Kidney Calculi
- Kidney Failure
- Kidney Neoplasms
- Latex Hypersensitivity
- Leiomyoma
- Lichen Planus
- Liver Neoplasms
- Lung Neoplasms
- Lupus Erythematosus
- Lupus Nephritis
- Lymphadenitis
- Lymphoma
- Lymphoproliferative Disorders
- Macular Degeneration
- Metabolic Syndrome X
- Metaplasia
- Mouth Neoplasms
- Mucocutaneous Lymph Node Syndrome
- Multiple Myeloma
- Musculoskeletal Diseases
- Mycobacterium Infections
- Myocardial Infarction
- Nasopharyngeal Neoplasms

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- Neoplasms
- Obesity
- Obstetric Labor
- Occupational Diseases
- Osteoporosis
- Ovarian cancer
- Ovarian Neoplasms
- Pain
- Pancreatic cancer
- Pancreatic Neoplasms
- Periodontitis
- Pneumoconiosis
- Postoperative Complications
- Precancerous Conditions
- Pre-Eclampsia
- Pregnancy Complications
- Premature Birth
- Prostate cancer
- Prostatic Neoplasms
- Proteinuria
- Pulmonary Disease
- Purpura
- Recurrence
- Respiratory Syncytial Virus Infections
- Retinal Vein Occlusion
- Rhinitis

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- Sarcoidosis
- Schistosomiasis mansoni
- Schizophrenia
- Skin Diseases
- Stomach Neoplasms
- Stomach Ulcer
- Stroke
- Substance Abuse
- Thyroid Diseases
- Tuberculosis
- Uterine Cervical Neoplasms
- Uterine Neoplasms
- Uveitis
- Vasculitis
- Waldenstrom Macroglobulinemia
- Werner syndrome
- Wounds and Injuries

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