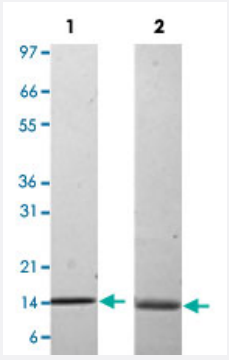
Bioactive

# IL4 (Human) Recombinant Protein

Catalog # P4558 Size 20 ug

## Applications




Lane 1: non-reducing conditions
Lane 2: reducing conditions

### Result of activity analysis

Result of activity analysis

MC-9 cells were cultured with 0 to 2 ng/mL human IL4. Cell proliferation was measured and the linear portion of the curve was us used to calculate the ED50.

## Specification

| | |
|---|---|
| **Product Description** | Human IL4 (P05112) recombinant protein expressed in *Escherichia coli*. |
| **Sequence** | MHKCDITLQEIIKTLNSLTEQKTLCTELTVTDIFAASKNTTEKETFCRAATVLRQFYSHHEKDTRCLG ATAQQFHRHKQLIRFLKRLDRNLWGLAGLNSCPVKEANQSTLENFLERLKTIMREKYSKCSS |
| **Host** | Escherichia coli |
| **Theoretical MW (kDa)** | 15 |
| **Form** | Lyophilized |
| **Preparation Method** | *Escherichia coli* expression system |
| **Endotoxin Level** | < 0.1 EU/ug |

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| | |
|---|---|
| **Activity** | The activity is determined by the proliferation of MC-9 cells. The expected $ED_{50}$ for this effect is 110-160 pg/mL. |
| **Quality Control Testing** | 1 ug/lane in 4-20% Tris-Glycine gel Stained with Coomassie Blue<br>Lane 1: non-reducing conditions<br>Lane 2: reducing conditions |
| **Storage Buffer** | No additive |
| **Storage Instruction** | Store at -20°C on dry atmosphere.<br>After reconstitution with sterilized water, store at -20°C.<br>Aliquot to avoid repeated freezing and thawing. |
| **Note** | Result of activity analysis<br>Result of activity analysis<br>MC-9 cells were cultured with 0 to 2 ng/mL human IL4. Cell proliferation was measured and the linear portion of the curve was us used to calculate the ED50. |

## Applications

- Functional Study
- SDS-PAGE

## Gene Info — IL4

| | |
|---|---|
| **Entrez GeneID** | 3565 |
| **Protein Accession#** | P05112 |
| **Gene Name** | IL4 |
| **Gene Alias** | BCGF-1, BCGF1, BSF1, IL-4, MGC79402 |
| **Gene Description** | interleukin 4 |
| **Omim ID** | 147780 |
| **Gene Ontology** | Hyperlink |

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| | |
|---|---|
| **Gene Summary** | The protein encoded by this gene is a pleiotropic cytokine produced by activated T cells. This cytokine is a ligand for interleukin 4 receptor. The interleukin 4 receptor also binds to IL13, which may contribute to many overlapping functions of this cytokine and IL13. STAT6, a signal transducer and activator of transcription, has been shown to play a central role in mediating the immune regulatory signal of this cytokine. This gene, IL3, IL5, IL13, and CSF2 form a cytokine gene cluster on chromosome 5q, with this gene particularly close to IL13. This gene, IL13 and IL5 are found to be regulated coordinately by several long-range regulatory elements in an over 120 kilobase range on the chromosome. Two alternatively spliced transcript variants of this gene encoding distinct isoforms have been reported. [provided by RefSeq |
| **Other Designations** | B cell growth factor 1\|B_cell stimulatory factor 1\|lymphocyte stimulatory factor 1 |

## Pathway

- Allograft rejection
- Asthma
- Autoimmune thyroid disease
- Cytokine-cytokine receptor interaction
- Fc epsilon RI signaling pathway
- Hematopoietic cell lineage
- Jak-STAT signaling pathway
- T cell receptor signaling pathway

## Disease

- Abortion
- Acquired Immunodeficiency Syndrome
- Acute Disease
- Adenocarcinoma
- Aggressive Periodontitis
- AIDS Dementia Complex
- Albuminuria
- Alcoholism

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- Alveolar Bone Loss
- Alveolitis
- Alzheimer disease
- Arthritis
- Asthma
- Atherosclerosis
- Autoimmune Diseases
- Bacteremia
- Biliary Tract Neoplasms
- Bone Diseases
- Brain Ischemia
- Brain Neoplasms
- Breast cancer
- Breast Neoplasms
- Bronchial Hyperreactivity
- Bronchiolitis
- Bronchopulmonary Dysplasia
- Brucellosis
- Cadaver
- Calcinosis
- Candidiasis
- Carcinoma
- Cardiomyopathy
- Cardiovascular Diseases
- Celiac Disease
- Central Nervous System Neoplasms

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- Cerebral Infarction
- Cerebrovascular Accident
- Chagas Disease
- Chlamydia Infections
- Cholecystolithiasis
- Choledocholithiasis
- Chorioamnionitis
- Chronic Disease
- Chronic Periodontitis
- Cognition Disorders
- Colitis
- Colon cancer
- Colonic Neoplasms
- Colorectal Neoplasms
- Common Variable Immunodeficiency
- Communicable Diseases
- Conjunctivitis
- Connective Tissue Diseases
- Constriction
- Coronary Artery Disease
- Coronary Disease
- Crohn Disease
- Cystitis
- Dengue
- Dental Plaque
- Dermatitis

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- Dermatomyositis
- Diabetes Complications
- Diabetes Mellitus
- Disease Progression
- Disease Susceptibility
- Drug Hypersensitivity
- Ductus Arteriosus
- Edema
- Endometriosis
- Enterocolitis
- Epidermal Necrolysis
- Epilepsy
- Esophageal Neoplasms
- Esophagitis
- Fatigue Syndrome
- Fetal Diseases
- Fetal Membranes
- Fibromyalgia
- Food Hypersensitivity
- Gastritis
- Genetic Predisposition to Disease
- Gingival Hemorrhage
- Glioblastoma
- Glioma
- Glomerulonephritis
- Gout

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- Graft vs Host Disease
- Graves Disease
- Graves Ophthalmopathy
- Hashimoto Disease
- Helicobacter Infections
- Hematologic Diseases
- Hemophilia A
- Hepatitis
- Hepatitis B
- Hepatitis C
- Herpesviridae Infections
- Histiocytosis
- HIV Infections
- Hodgkin Disease
- Hyperglycemia
- Hyperparathyroidism
- Hypersensitivity
- Hypertension
- Idiopathic Pulmonary Fibrosis
- Infant
- Infection
- Inflammation
- Inflammatory Bowel Diseases
- Intervertebral Disk Displacement
- Inversion
- Irritable Bowel Syndrome

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- Kidney Diseases
- Kidney Failure
- Kidney Neoplasms
- Leiomyoma
- Leishmaniasis
- Leptospirosis
- Leukemia
- Lichen Planus
- Liver Cirrhosis
- Liver Diseases
- Liver Neoplasms
- Lung Diseases
- Lung Neoplasms
- Lupus Erythematosus
- Lymphatic Metastasis
- Lymphoma
- Lymphoproliferative Disorders
- Malaria
- Malignant melanoma
- Melanoma
- Meningococcal Infections
- Mental Disorders
- Metabolic Syndrome X
- Metaplasia
- Migraine Disorders
- Mitral Valve Prolapse

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- Mouth Neoplasms
- Mucocutaneous Lymph Node Syndrome
- Multiple Myeloma
- Multiple Organ Failure
- Multiple Sclerosis
- Multiple Trauma
- Musculoskeletal Diseases
- Myocardial Infarction
- Myocardial Ischemia
- Myositis
- Nasal Polyps
- Neoplasm Invasiveness
- Neoplasms
- Nephrosis
- Nephrotic Syndrome
- Neuropsychological Tests
- Obesity
- Obstetric Labor
- Occupational Diseases
- Osteoarthritis
- Osteolysis
- Osteomyelitis
- Osteoporosis

- Otitis Media
- Pain

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- Pancreatic cancer
- Pancreatic Neoplasms
- Paracoccidioidomycosis
- Parasitemia
- Parasitic Diseases
- Parkinson disease
- Pemphigoid
- Pemphigus
- Peptic Ulcer
- Periodontal Attachment Loss
- Periodontal Pocket
- Periodontitis
- Placenta Diseases
- Polymyositis
- Postoperative Complications
- Precancerous Conditions
- Pre-Eclampsia
- Pregnancy Complications
- Premature Birth
- Prenatal Exposure Delayed Effects
- Prostate cancer
- Prostatic Hyperplasia
- Prostatic Neoplasms
- Prosthesis Failure
- Psoriasis
- Psychiatric Status Rating Scales

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- Pulmonary Disease
- Pulmonary Fibrosis
- Purpura
- Q Fever
- Radiation Injuries
- Radiation Pneumonitis
- Recurrence
- Respiratory Hypersensitivity
- Respiratory Sounds
- Respiratory Syncytial Virus Infections
- Retinal Vein Occlusion
- Rheumatic Heart Disease
- Rhinitis
- Sarcoidosis
- Sarcoma
- Schistosomiasis japonica
- Schistosomiasis mansoni
- Schizophrenia
- Sciatica
- Scleroderma
- Seizures
- Sepsis
- Severe Acute Respiratory Syndrome
- Shock
- Skin Diseases
- Skin Neoplasms

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- Skin Ulcer
- Spondylitis
- Staphylococcal Infections
- Stevens-Johnson Syndrome
- Stomach Neoplasms
- Stroke
- Subacute Sclerosing Panencephalitis
- Sudden Infant Death
- Temporal Arteritis
- Thoracic Neoplasms
- Trachoma
- Trypanosomiasis
- Tuberculosis
- Urinary Bladder Neoplasms
- Urticaria
- Uterine Neoplasms
- Vaginosis
- Viremia
- Vitiligo
- Waldenstrom Macroglobulinemia
- Werner syndrome

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