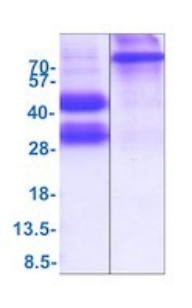
Bioactive

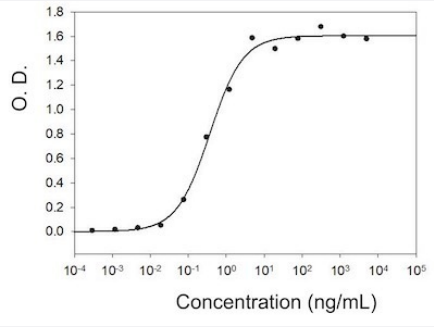
IL12 (p35 & p40) (Human) Recombinant Protein

Catalog # P7694 Size 250 ug

Applications



SDS-PAGE analysis of IL12 (Human) Recombinant Protein



Result of activity analysis

Result of activity analysis

Specification

Product Description	Human IL12 p35 (P29459, 23 a.a.- 219 a.a.) and IL12 p40 (P29460, 23 a.a.- 328 a.a.) partial recombinant protein with His tag expressed in *Baculovirus* expression system.
Sequence	IL12B(p40)_x005F_x000D__x000D_ IWELKKDVYVVELDWYPDAPGEMVVLTCDTPEEDGITWTL DQSSEVLGSGKTLTIQVKEFGDAGQYTCHKGGEVLSHSLLLLHKKEDGIWSTDILKDQKEPKNKT FLRCEAKNYSGRFTCWWLTTISTDLTFSVKSSRGSSDPQGVTCGAATLSAERVRGDNKEYEYSV ECQEDSACPAAEESLPIEVMVDAVHKLKYENYTSSFFIRDIIKPDPPKNLQLKPLKNSRQVEVSWE YPDTWSTPHSYFSLTFCVQVQGKSKREKKDRVFTDKTSATVICRKNASISVRAQDRYYSSSWSE WASVPCS_x005F_x000D__x000D_ IL12A(p35)RNLPVATPDPGMFPCLHHSQNLLRAVSNMLQ KARQTLEFYPCTSEEIDHEDITKDKTSTVEACLPLELTKNESCLNSRETSFITNGSCLASRKTSFMM ALCLSSIYEDLKMYQVEFKTMNAKLLMDPKRQIFLDQNMLAVIDELMQALNFNSETVPQKSSLEEP DFYKTKIKLCILLHAFRIRAVTIDRVMSYLNAS
Host	Viruses

Theoretical MW (kDa)	34.6, 23.3
Form	Liquid
Preparation Method	*Baculovirus* expression system
Concentration	0.5mg/mL
Purity	> 90% by SDS-PAGE
Endotoxin Level	< 1 EU per 1ug of protein (determined by LAL method)
Activity	The activity is determined by the IFN-g ELISA in a using NK-92 human natural killer cells. The ED_{50} range ≤ 1ng/mL.
Quality Control Testing	3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain. SDS-PAGE analysis of IL12 (Human) Recombinant Protein
Recommend Usage	SDS-PAGE Bioactivity The optimal working dilution should be determined by the end user.
Storage Buffer	In PBS, pH 7.4 (10% glycerol).
Storage Instruction	Store at 2°C to 8°C for 1 week. For long term storage, aliquot and store at -20°C to -80°C. Aliquot to avoid repeated freezing and thawing.
Note	Result of activity analysis Result of activity analysis

Applications

- Functional Study
- SDS-PAGE

Gene Info — IL12A

Entrez GeneID	3592
Protein Accession#	P29460(p40)/P29459(p35)
Gene Name	IL12A
Gene Alias	CLMF, IL-12A, NFSK, NKSF1, P35

Gene Description	interleukin 12A (natural killer cell stimulatory factor 1, cytotoxic lymphocyte maturation factor 1, p35)
Omim ID	161560
Gene Ontology	Hyperlink
Gene Summary	This gene encodes a subunit of a cytokine that acts on T and natural killer cells, and has a broad array of biological activities. The cytokine is a disulfide-linked heterodimer composed of the 35-kD subunit encoded by this gene, and a 40-kD subunit that is a member of the cytokine receptor family. This cytokine is required for the T-cell-independent induction of interferon (IFN)-gamma, and is important for the differentiation of both Th1 and Th2 cells. The responses of lymphocytes to this cytokine are mediated by the activator of transcription protein STAT4. Nitric oxide synthase 2A (NOS2A/NOS2) is found to be required for the signaling process of this cytokine in innate immunity. [provided by RefSeq
Other Designations	IL-12, subunit p35|NF cell stimulatory factor chain 1|cytotoxic lymphocyte maturation factor 1, p35|interleukin 12, p35|interleukin 12A|interleukin-12 alpha chain|natural killer cell stimulatory factor 1, 35 kD subunit

Gene Info — IL12B

Entrez GeneID	3593
Protein Accession#	P29460(p40)/P29459(p35)
Gene Name	IL12B
Gene Alias	CLMF, CLMF2, IL-12B, NKSF, NKSF2
Gene Description	interleukin 12B (natural killer cell stimulatory factor 2, cytotoxic lymphocyte maturation factor 2, p40)
Omim ID	161561 177900 209950 600807
Gene Ontology	Hyperlink
Gene Summary	This gene encodes a subunit of interleukin 12, a cytokine that acts on T and natural killer cells, and has a broad array of biological activities. Interleukin 12 is a disulfide-linked heterodimer composed of the 40 kD cytokine receptor like subunit encoded by this gene, and a 35 kD subunit encoded by IL12A. This cytokine is expressed by activated macrophages that serve as an essential inducer of Th1 cells development. This cytokine has been found to be important for sustaining a sufficient number of memory/effector Th1 cells to mediate long-term protection to an intracellular pathogen. Overexpression of this gene was observed in the central nervous system of patients with multiple sclerosis (MS), suggesting a role of this cytokine in the pathogenesis of the disease. The promoter polymorphism of this gene has been reported to be associated with the severity of atopic and non-atopic asthma in children. [provided by RefSeq

Other Designations	IL12, subunit p40|OTTHUMP00000160820|cytotoxic lymphocyte maturation factor 2, p40|interleukin 12, p40|interleukin 12B|interleukin-12 beta chain|natural killer cell stimulatory factor, 40 kD subunit|natural killer cell stimulatory factor-2

Pathway

- Allograft rejection
- Allograft rejection
- Cytokine-cytokine receptor interaction
- Cytokine-cytokine receptor interaction
- Jak-STAT signaling pathway
- Jak-STAT signaling pathway
- Toll-like receptor signaling pathway
- Toll-like receptor signaling pathway
- Type I diabetes mellitus
- Type I diabetes mellitus

Disease

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

- Alcoholism
- Alveolitis
- Alzheimer Disease
- Anemia
- Anemia
- Arthritis
- Arthritis
- Asthma
- Asthma
- Atherosclerosis
- Autoimmune Diseases
- Autoimmune Diseases
- Barrett Esophagus
- Behcet Syndrome
- Brain Neoplasms
- Breast Neoplasms
- Bronchial Hyperreactivity
- Bronchiolitis
- Bronchiolitis
- Bronchopulmonary Dysplasia
- Cadaver
- Carcinoma
- Carcinoma
- Cardiovascular Diseases
- Cardiovascular Diseases
- Celiac Disease

- Celiac Disease
- Chagas Cardiomyopathy
- Chorioamnionitis
- Chorioamnionitis
- Chronic Periodontitis
- Colitis
- Colorectal Neoplasms
- Colorectal Neoplasms
- Common Variable Immunodeficiency
- Coronary Artery Disease
- Coronary Artery Disease
- Crohn Disease
- Cytomegalovirus Infections
- Dermatitis
- Dermatitis
- Diabetes Complications
- Diabetes Mellitus
- Diabetes Mellitus
- Disease Progression
- Disease Progression
- Disease Susceptibility
- Disease Susceptibility
- Diseases in Twins
- Ductus Arteriosus
- Edema
- Edema

- Enterocolitis
- Esophageal Neoplasms
- Esophageal Neoplasms
- Esophagitis
- Fetal Membranes
- Fetal Membranes
- Gastritis
- Genetic Predisposition to Disease
- Genetic Predisposition to Disease
- Giant Cell Arteritis
- Gingival Hemorrhage
- Glioma
- Graves Disease
- Graves Ophthalmopathy
- Helicobacter Infections
- Helicobacter Infections
- Hematologic Diseases
- Hematologic Diseases
- Hepatitis B
- Hepatitis B
- Hepatitis C
- Hepatitis C
- Hernia
- Herpesviridae Infections
- HIV Infections
- Hodgkin Disease

- Hodgkin Disease
- Hyperglycemia
- Hypersensitivity
- Hypersensitivity
- Hypertension
- Hypotension
- Idiopathic Pulmonary Fibrosis
- Immune System Diseases
- Infant
- Infant
- Infection
- Inflammation
- Inflammation
- Inflammatory Bowel Diseases
- Kidney Diseases
- Kidney Failure
- Kidney Failure
- Leprosy
- Leptospirosis
- Liver Cirrhosis
- Liver Cirrhosis
- Liver Neoplasms
- Lung Diseases
- Lung Neoplasms
- Lung Neoplasms
- Lupus Erythematosus

- Lupus Erythematosus
- Lupus Nephritis
- Lymphadenitis
- Lymphatic Metastasis
- Lymphocytosis
- Lymphoma
- Lymphoma
- Lymphoproliferative Disorders
- Lymphoproliferative Disorders
- Malaria
- Malaria
- Malignant melanoma
- Melanoma
- Mental Disorders
- Multiple Myeloma
- Multiple Myeloma
- Multiple Sclerosis
- Multiple Sclerosis
- Myasthenia Gravis
- Myasthenia Gravis
- Mycobacterium Infections
- Myocardial Infarction
- Nasopharyngeal Neoplasms
- Neoplasm Invasiveness
- Neuropsychological Tests
- Obstetric Labor

- Obstetric Labor
- Occupational Diseases
- Occupational Diseases
- Osteoarthritis
- Osteolysis
- Pain
- Papillomavirus Infections
- Papillomavirus Infections
- Parasitemia
- Paratyphoid Fever
- Pemphigus
- Peptic Ulcer
- Peptic Ulcer Hemorrhage
- Periodontal Pocket
- Periodontitis
- Periodontitis
- Pneumonia
- Polymyalgia Rheumatica
- Postoperative Complications
- Pre-Eclampsia
- Pre-Eclampsia
- Premature Birth
- Premature Birth
- Prosthesis Failure
- Proteinuria
- Psoriasis

- Psoriasis
- Pulmonary Disease
- Pulmonary Disease
- Pulmonary Fibrosis
- Radiation Injuries
- Radiation Pneumonitis
- Rectal Fistula
- Recurrence
- Respiratory Distress Syndrome
- Respiratory Hypersensitivity
- Respiratory Syncytial Virus Infections
- Respiratory Syncytial Virus Infections
- Respiratory Tract Infections
- Rhinitis
- Rubella
- Sarcoidosis
- Sarcoidosis
- Sarcoma

- Schizophrenia
- Schizophrenia
- Scleroderma
- Sepsis
- Severe Acute Respiratory Syndrome
- Silicosis
- Skin Neoplasms

- Skin Ulcer
- Stomach Neoplasms
- Stomach Neoplasms
- Stomatitis
- Streptococcal Infections
- Stroke
- Subacute Sclerosing Panencephalitis
- Substance Abuse
- Syndrome
- Thoracic Neoplasms
- Thyroiditis
- Tuberculosis
- Tuberculosis
- Typhoid Fever
- Urinary Bladder Neoplasms
- Urinary Bladder Neoplasms
- Uterine Cervical Neoplasms
- Uterine Cervical Neoplasms
- Waldenstrom Macroglobulinemia
- Waldenstrom Macroglobulinemia
- Werner syndrome
- Werner syndrome