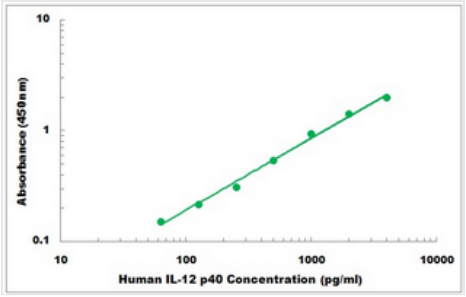
Il-12 P40 (IL12B) ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	IL-12 p40 (IL12B), ELISA Kit
Full Product Name	Human IL-12 p40 ELISA Kit
Product Gene Name	IL12B elisa kit
Product Synonym Names	NKSF2; Interleukin-12 subunit beta; IL-12B; Cytotoxic lymphocyte maturation factor 40 kDa subunit; CLMF p40; IL-12 subunit p40; NK cell stimulatory factor chain 2; NKSF2
Species Reactivity	Human
Assay Type	Sandwich
Samples	Cell Culture Supernatants, Serum, Plasma, Tissue Homogenates
Detection Range	62.5 pg/ml - 4000 pg/ml
Sensitivity	30 pg/ml
Preparation and Storage	Shipped and store at 4 degree C for 6 months, store at -20 degree C for one year. Avoid freeze/thaw cycles.
Molecular Weight	37,169 Da
OMIM	phenotype 614890
3D Structure	ModBase 3D Structure for P29460
Detection Method	Colorimetric
Applications Tested/Suitable for IL12B elisa kit	Sandwich ELISA (SE)
Related Product Information for IL12B elisa kit	Sandwich ELISA for quantitative detection of Human IL-12 p40 concentrations.
Other Notes	Small volumes of IL12B elisa kit vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for IL12B purchase	MBS824762 is a ready-to-use microwell, strip-or-full plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the IL-12 p40 (IL12B) ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing IL12B. The ELISA analytical biochemical technique of the MBS824762 kit is based on IL12B antibody-IL12B antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect IL12B antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, IL12B. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).



Typical Testing Data/Standard Curve (for reference only) of IL12B elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for IL12B. It may not necessarily be applicable to this product.

NCBI GI #	24497438
NCBI GeneID	3593
NCBI Accession #	NP_002178.2
UniProt Primary Accession #	P29460
UniProt Related Accession #	P29460
GenBank Nucleotide #	NM_002187.2
NCBI Official Full Name	interleukin-12 subunit beta
NCBI Official Synonym Full Names	interleukin 12B
NCBI Official Symbol	IL12B
NCBI Official Synonym Symbols	CLMF; NKSF; CLMF2; IMD28; IMD29; NKSF2; IL-12B
UniProt Protein Name	Interleukin-12 subunit beta
UniProt Synonym Protein Names	Cytotoxic lymphocyte maturation factor 40 kDa subunit; CLMF p40; IL-12 subunit p40; NK cell stimulatory factor chain 2; NKSF2
Protein Family	Interleukin
UniProt Gene Name	IL12B
UniProt Synonym Gene Names	NKSF2; IL-12B; CLMF p40; NKSF2
UniProt Entry Name	IL12B_HUMAN
NCBI Protein Information	interleukin-12 subunit beta; CLMF p40; IL-12 subunit p40; IL12, subunit p40; interleukin 12, p40; interleukin-12 beta chain; NK cell stimulatory factor chain 2; cytotoxic lymphocyte maturation factor 40 kDa subunit; natural killer cell stimulatory factor, 40 kD subunit; interleukin 12B (natural killer cell stimulatory factor 2, cytotoxic lymphocyte maturation factor 2, p40)
NCBI Summary for IL12B	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, Jul 2008]

UniProt Comments for IL12B	IL12B: Cytokine that can act as a growth factor for activated T and NK cells, enhance the lytic activity of NK/lymphokine- activated killer cells, and stimulate the production of IFN-gamma by resting PBMC. Defects in IL12B are a cause of mendelian susceptibility to mycobacterial disease (MSMD); also known as familial disseminated atypical mycobacterial infection. This rare condition confers predisposition to illness caused by moderately virulent mycobacterial species, such as Bacillus Calmette-Guerin (BCG) vaccine and environmental non-tuberculous mycobacteria, and by the more virulent Mycobacterium tuberculosis. Other microorganisms rarely cause severe clinical disease in individuals with susceptibility to mycobacterial infections, with the exception of Salmonella which infects less than 50% of these individuals. The pathogenic mechanism underlying MSMD is the impairment of interferon-gamma mediated immunity, whose severity determines the clinical outcome. Some patients die of overwhelming mycobacterial disease with lepromatous-like lesions in early childhood, whereas others develop, later in life, disseminated but curable infections with tuberculoid granulomas. MSMD is a genetically heterogeneous disease with autosomal recessive, autosomal dominant or X-linked inheritance. Genetic variations in IL12B are a cause of susceptibility to psoriasis type 11 (PSORS11). Psoriasis is a common, chronic inflammatory disease of the skin with multifactorial etiology. It is characterized by red, scaly plaques usually found on the scalp, elbows and knees. These lesions are caused by abnormal keratinocyte proliferation and infiltration of inflammatory cells into the dermis and epidermis. Belongs to the type I cytokine receptor family. Type 3 subfamily. Protein type: Secreted, signal peptide; Cytokine; Secreted Chromosomal Location of Human Ortholog: 5q31.1-q33.1 Cellular Component: extracellular space; membrane; interleukin-12 complex; cytoplasm Molecular Function: identical protein binding; hematopoietin/interferon-class (D200-domain) cytokine receptor activity; protein binding; interleukin-12 alpha subunit binding; protein homodimerization activity; growth factor activity; protein heterodimerization activity; cytokine activity; interleukin-23 receptor binding; interleukin-12 receptor binding Biological Process: positive regulation of granulocyte macrophage colony-stimulating factor production; positive regulation of cell adhesion; positive regulation of T-helper 1 type immune response; negative regulation of interleukin-10 production; positive regulation of T cell mediated cytotoxicity; positive regulation of interleukin-12 production; positive regulation of osteoclast differentiation; negative regulation of smooth muscle cell proliferation; positive regulation of NK T cell proliferation; natural killer cell activation; positive regulation of tyrosine phosphorylation of Stat4 protein; positive regulation of NF-kappaB import into nucleus; sensory perception of pain; positive regulation of activated T cell proliferation; defense response to Gram-negative bacterium; positive regulation of interleukin-10 production; positive regulation of natural killer cell activation; positive regulation of tyrosine phosphorylation of Stat3 protein; positive regulation of lymphocyte proliferation; natural killer cell activation during immune response; positive regulation of T cell proliferation; negative regulation of inflammatory response to antigenic stimulus; cell cycle arrest; defense response to virus; regulation of cytokine biosynthetic process; positive regulation of interleukin-17 production; positive regulation of memory T cell differentiation; T-helper 1 type immune response; positive regulation of natural killer cell proliferation; cell migration; positive regulation of NK T cell activation; positive regulation of natural killer cell mediated cytotoxicity directed against tumor cell target; T-helper cell differentiation; cytokine and chemokine mediated signaling pathway; defense response to protozoan; positive regulation of tumor necrosis factor production; regulation of tyrosine phosphorylation of Stat1 protein; response to UV-B; positive regulation of tissue remodeling; positive regulation of interferon-gamma production; negative regulation of interleukin-17 production; positive regulation of tyrosine phosphorylation of Stat5 protein; positive regulation of mononuclear cell proliferation; sexual reproduction; interferon-gamma biosynthetic process; positive regulation of defense response to virus by host; positive regulation of interferon-gamma biosynthetic process; positive regulation of inflammatory response Disease: Immunodeficiency 29
Research Articles on IL12B	**1.** These data indicate that type II Toxoplasma gondii GRA15II induction of CD40 promotes parasite immunity through the production of IL-12.
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