

Interleukin 12B (IL12B) Active Protein | IL12B active protein

Active Interleukin 12B (IL12B)

CATALOG # AAA150970	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Interleukin 12B (IL12B); Active Interleukin 12B (IL12B); IL12B/Interleukin 12B; p40; IL12-B; CLMF2; NKSF2; Natural Killer Cell Stimulatory Factor 2; Cytotoxic Lymphocyte Maturation Factor 2; Interleukin 23; P40 Subunit; IL12B active protein

PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	Greater than 95% by SDS-PAGE
Form/Format	Freeze-dried powder 20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
Sequence	Val30~Ser3 20
Applicable Applications for IL12B active protein	Activity Assay, Cell Culture
Endotoxin	<1.0EU per 1ug (determined by the LAL method)
Tag	N-terminal His Tag
Biological Activity	Active
Expression System	Prokaryotic expression
Organism Species	Human
Isoelectric Point	5.5
Reconstitution	Reconstitute in 20mM Tris, 150mM NaCl (PH8.0) to a concentration of 0.1-1.0mg/mL. Do not vortex.
Preparation and Storage	Store at 2-8 degree C for one month, -80 degree C for 12 months Stable for 12 months if correctly stored. The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37 degree C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

DTPEEDGITW TLDQSSEVLG SGKTLTIQVK EFGDAGQYTC HKGGEVLSHS
LLLLHHKKEDG IWSTDILKDQ KEPKNKTFILR CEAKNYSGRF TCWMLTTIST
DLTFSVKSSR GSDDPQGVTC GAATLSAERV RGDNKEYEYS VECQEDSACP
AAEESLPTEV MVDVHKLKY ENYTSFFIR DIIKPPPKN LQLKPLKNSR
QVEVSWEYPD TWSTPHSYFS LTFVCVQVGK SKREKKDRVF TDKTSATVIC
RKNASISVRA QDRYYSSSHS

Sequence

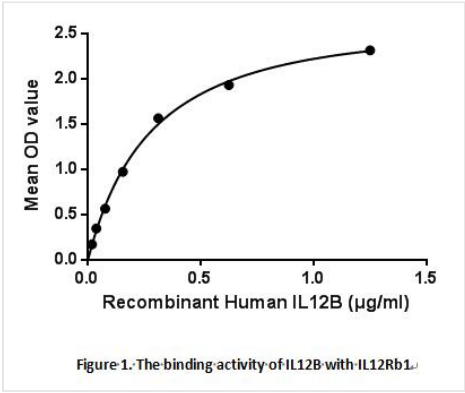
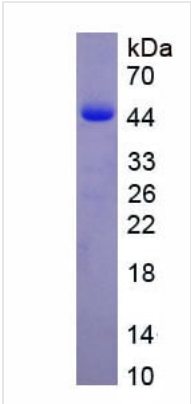


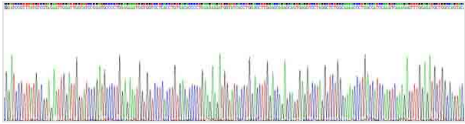
Figure 1. The binding activity of IL12B with IL12Rb1.

Bioactivity

Interleukin 12B (IL12B) 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. Interleukin 12B can combine with Interleukin 12 Receptor Beta 1 (IL12Rb1). Thus a binding ELISA assay was conducted to detect the interaction of recombinant human IL12B and recombinant human IL12Rb1. Briefly, biotin-linked recombinant human IL12B were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl then transferred to IL12Rb1-coated microtiter wells and incubated for 1 h at 37°. Wells were washed with PBST 3 times and incubation with HRP conjugate for 30 min, then wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°. Finally, add 50 µl stop solution to the wells and read at 450 nm immediately. The binding activity of IL12B and IL12Rb1 was shown in Figure 1, and this effect was in a dose dependent manner.



SDS-PAGE
SDS-PAGE



Sequence
Gene Sequencing (extract)

ADDITIONAL INFORMATION

Related Product Information for IL12B active protein	Interleukin 12B (IL12B) 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. Interleukin 12B can combine with Interleukin 12 Receptor Beta 1 (IL12Rb1). Thus a binding ELISA assay was conducted to detect the interaction of recombinant human IL12B and recombinant human IL12Rb1. Briefly, biotin-linked recombinant human IL12B were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl then transferred to IL12Rb1-coated microtiter wells and incubated for 1 h at 37 degree C. Wells were washed with PBST 3 times and incubation with HRP conjugate for 30 min, then wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 degree C. Finally, add 50 µl stop solution to the wells and read at 450 nm immediately. The binding activity of IL12B and IL12Rb1 was shown in Figure 1, and this effect was in a dose dependent manner.
Product Categories/Family for IL12B active protein	Cytokine; Infection immunity; Immune molecule; Active, prokaryotic recombinant

NCBI AND UNIPROT INFORMATION

NCBI GI #	24497438
NCBI GeneID	3593
NCBI Accession #	NP_002178.2
NCBI GenBank Nucleotide #	NM_002187.2
UniProt Accession #	P29460
Molecular Weight	328
NCBI Official Full Name	interleukin-12 subunit beta
NCBI Official Synonym Full Names	interleukin 12B (natural killer cell stimulatory factor 2, cytotoxic lymphocyte maturation factor 2, p40)
NCBI Official Symbol	IL12B
NCBI Official Synonym Symbols	CLMF; NKSF; CLMF2; NKSF2; IL-12B
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,
UniProt Protein Name	Interleukin-12 subunit beta
UniProt Gene Name	IL12B
UniProt Synonym Gene Names	NKSF2; IL-12B; CLMF p40; NKSF2
UniProt Entry Name	IL12B_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/e-coli-active-protein/interleukin-12b-il12b/150970>