

Product datasheet for RC210013

IL2 (NM_000586) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: IL2 (NM_000586) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: IL2
Synonyms: IL-2; lymphokine; TCGF
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >RC210013 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAAACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGTACAGGATGCAACTCCTGTCTTGCACTTAAGTCTTGCACTTGTCACAAACAGTGCACCTACTT
 CAAGTTCTACAAAGAAAACACAGCTACAACCTGGAGCATTTACTGCTGGATTTACAGATGATTTTGAATGG
 AATTAATAATTACAAGAATCCCAAACCTACCAGGATGCTCACATTTAAGTTTTACATGCCAAGAAGGCC
 ACAGAACTGAAACATCTTCAGTGTCTAGAAGAAGAACTCAAACCTCTGGAGGAAGTGCTAAATTTAGCTC
 AAAGCAAAAACCTTCACTTAAGACCCAGGGACTTAATCAGCAATATCAACGTAATAGTTCTGGAACATAA
 GGGATCTGAAACAACATTCATGTGTGAATATGCTGATGAGACAGCAACCATTGTAGAATTTCTGAACAGA
 TGGATTACCTTTTGTCAAAGCATCATCTCAACACTGACT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC210013 protein sequence
 Red=Cloning site Green=Tags(s)

MYRMQLLSICIALSLALVTNSAPTSSTKKTQLQLEHLLDLQMILNGINNYKNPKLTRMLTFKFYMPKKA
 TELKHLQCLEELKPLEEVLNLAQSKNFHLRPRDLISINIVIVLELKGSETTFMCEYADETATIVEFLNR
 WITFCQSIISTLT

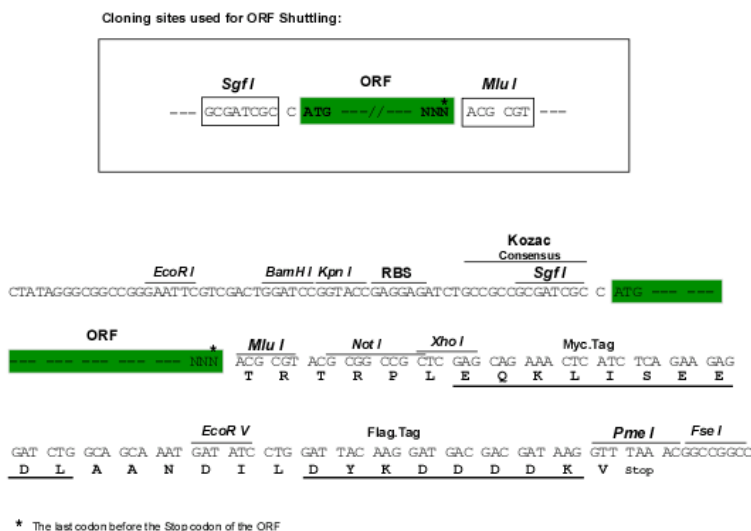
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6070_e01.zip


[View online »](#)

Restriction Sites: Sgfl-MluI

Cloning Scheme:



ACCN: NM_000586

ORF Size: 459 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

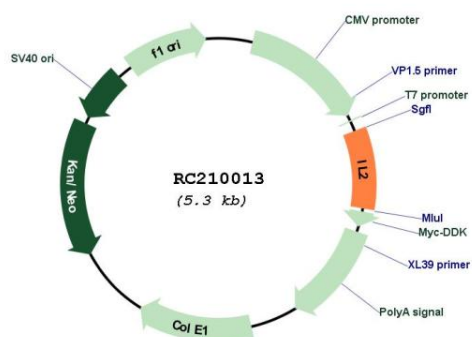
RefSeq: [NM_000586.4](#)

RefSeq Size: 822 bp

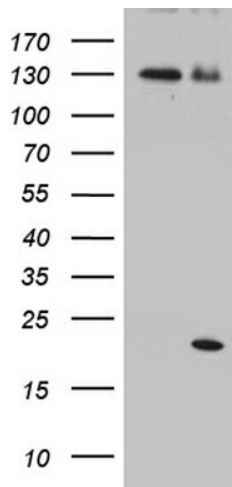
RefSeq ORF: 462 bp

Locus ID:	3558
UniProt ID:	P60568
Cytogenetics:	4q27
Protein Families:	Druggable Genome, Secreted Protein
Protein Pathways:	Allograft rejection, Autoimmune thyroid disease, Cytokine-cytokine receptor interaction, Graft-versus-host disease, Jak-STAT signaling pathway, T cell receptor signaling pathway, Type I diabetes mellitus
MW:	17.6 kDa
Gene Summary:	This gene is a member of the interleukin 2 (IL2) cytokine subfamily which includes IL4, IL7, IL9, IL15, IL21, erythropoietin, and thrombopoietin. The protein encoded by this gene is a secreted cytokine produced by activated CD4+ and CD8+ T lymphocytes, that is important for the proliferation of T and B lymphocytes. The receptor of this cytokine (IL2R) is a heterotrimeric protein complex whose gamma chain is also shared by IL4 and IL7. The expression of this gene in mature thymocytes is monoallelic, which represents an unusual regulatory mode for controlling the precise expression of a single gene. The targeted disruption of a similar gene in mice leads to ulcerative colitis-like disease, which suggests an essential role of this gene in the immune response to antigenic stimuli. [provided by RefSeq, Sep 2020]

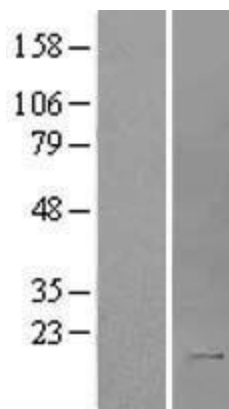
Product images:



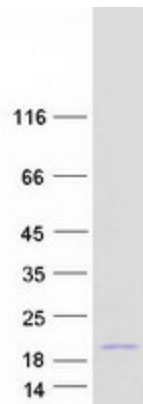
Circular map for RC210013



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY IL2 (Cat# RC210013, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-IL2 (Cat# [TA810724])(1:500). Positive lysates [LY424619] (100ug) and [LC424619] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY424619]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210013 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified IL2 protein (Cat# [TP310013]). The protein was produced from HEK293T cells transfected with IL2 cDNA clone (Cat# RC210013) using MegaTran 2.0 (Cat# [TT210002]).