

## Product datasheet for **SC300104**

### IL4 (NM\_000589) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	IL4 (NM_000589) Human Untagged Clone
Tag:	Tag Free
Symbol:	IL4
Synonyms:	BCGF-1; BCGF1; BSF-1; BSF1; IL-4
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene sequence for NM_000589 edited TGCATCGTTAGCTTCTCCTGATAAACTAATTGCCTCACATTGTCCTGCAAATCGACACC TATTAATGGGTCTCACCTCCCAACTGCTTCCCCCTCTGTTCTTCTGCTAGCATGTGCCG GCAACTTTGTCCACGGACACAAGTGCGATATCACCTTACAGGAGATCATAAAACTTTGA ACAGCCTCACAGAGCAGAAGACTCTGTGCACCGAGTTGACCGTAACAGACATCTTTGCTG CCTCCAAGAACAACACTGAGAAGGAAACCTTCTGCAGGGCTGCGACTGTGCTCCGGCAGT TCTACAGCCACCATGAGAAGGACACTCGCTGCCTGGGTGCGACTGCACAGCAGTTCCACA GGCACAAGCAGCTGATCCGATTCTGAAACGGCTCGACAGGAACCTCTGGGGCCTGGCGG GCTTGAATTCTGCTGTGAAGGAAGCCAACCAGGTACGTTGGAAAACCTTCTGGAAA GGCTAAAGACGATCATGAGAGAGAAATATCAAAGTGTTTCGAGCTGAA



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**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_000589 unedited  
 GGCATTTTGTATACGACTCCTATAGGGCGGCCGTAATTCGTCGACTGCATCGTTAGCT  
 TCTCCTGATAAACTAATTGCCTCACATTGTCACTGCAAATCGACACCTATTAATGGGTCT  
 CACCTCCCAACTGCTTCCCCCTCTGTTCTTCTGCTAGCATGTGCCGGCAACTTTGTCCA  
 CGGACACAAGTGCATATCACCTTACAGGAGATCATCAAACCTTTGAACAGCCTCACAGA  
 GCAGAAGACTCTGTGCACCGAGTTGACCGTAACAGACATCTTTGCTGCCTCCAAGAACAC  
 AACTGAGAAGGAAACCTTCTGCAGGGCTGCGACTGTGCTCCGGCAGTTCTACAGCCACA  
 TGAGAAGGACACTCGCTGCCTGGGTGCGACTGCACAGCAGTTCCACAGGACAAGCAGCT  
 GATCCGATTCTGAAACGGCTCGACAGGAACCTCTGGGGCTGGCGGGCTTGAATTCCTG  
 TCCTGTGAAGGAAGCCAACCAGAGTACGTTGAAAACTTCTTGGAAAGGCTAAAGACGAT  
 CATGAGAGAGAAAATTTCAAAGTGTTCGAGCTGAAAAGCTTAACTAGCTAGCGGACCGAC  
 GCGTTGCGGCCGCTCGAGCAGAACTCATCTCTGAAGAGGATCTGGCAAATGATATCCTG  
 CATCACCATCACCATCACGTTTAAACGGCCGGCCGGTTCATAGCTGTTTCTGAACAGA  
 TCCCGGGTGGCATCCCTGTGACCCCTCCCAGTGCCTCTCCTGGCCCTGGAAGTTGCCAC  
 TCCAGTGGCCACCAGCCTTGCTTAATAAATTAAGTTGCATCATTTTGTCTGACTAGTGT  
 CTCTATATATATGGGTGAGGGGTTGGTTATGGGAGCAAGGGCAGTTGGGAAGACAACCT  
 TGTAGGGCTGCGGGTCTATTGGGACAGCTGGAGTGCATGGCACATCTTGGCTCACTGCAT  
 TCTCCGCCCTTCTGGTTCAGGCGATT

**3' Read Nucleotide Sequence:**

>OriGene 3' read for NM\_000589 unedited  
 TGCTGATGCACCTCAGGGCCGAGAGGCACTGGGGAGGGTCCAGGGATGCCCCGGGAT  
 CTGTTCCAGGAAACAGCTATGACCCGGCCGGCCGTTTAAACGTGATGGTATGGTATGC  
 AGGATATCATTTGCCAGATCCTTTCAGAGATGAGTTTCTGCTCGAGCGCCGCAACGCG  
 TCGGTCCGCTAGCTAGTTAAGCTTTTCAGCTCGAACACTTTGAATATTTCTCTCATGA  
 TCGTCTTTAGCCTTTCAAGAAGTTTTCAACGTAAGTCTGTTGGCTTCCTTACAGGAC  
 AGGAATTAAGCCCGCCAGGCCAGAGGTTCTGTGCGAGCCGTTTCAGGAATCGGATCA  
 GCTGCTTGTGCCTGTGGAAGTGTGTGTCAGTCCGACCCAGGCAGCGAGTGTCTTCTCAT  
 GGTGGCTGTAGAAGTCCCGGAGCACAGTCCGAGCCCTGCAGAAGGTTTCTTCTCAGTTG  
 TGTCTTGGAGGCAGCAAAGATGTCTGTTACGGTCAACTCGGTGCACAGAGTCTTCTGCT  
 CTGTGAGGCTGTTCAAAGTTTTGATGATCTCCTGTAAGGTGATATCGCACTTGTGTCCGT  
 GGACAAAGTTGCCGGCACATGCTAGCAGGAAGAACAGAGGGGGAAGCAGTTGGGAGGTGA  
 GACCCATTAATAGGTGTGATTTGCAGTGACAATGTGAGGCAATTAGTTTATCAGGAGAA  
 GCTAACGATGCAGTGCAGCAATTCGCGGCCGCCCTATAGTGAGTGCATTAACAAAATCT  
 GACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCCACCGTACACGCCTACCGCCCA  
 TTTGCGTCAACGGCGGGGTTATTACGACATTTTGGAAAGTCCCGTTGATTTTGGTGCCA  
 AAACAACTCCCATGACGTCATGGGGTGGAGAACTTGGAAATCCCCGTGGAGTCAA

**Restriction Sites:**

Please inquire

**ACCN:**

NM\_000589

**Insert Size:**

500 bp

<b>OTI Disclaimer:</b>	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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. <a href="#">More info</a></p>
<b>OTI Annotation:</b>	The open reading frame of this TrueClone was fully sequenced and found to be a perfect match to the protein associated to this reference.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<a href="#">NM_000589.2</a> , <a href="#">NP_000580.1</a>
<b>RefSeq Size:</b>	921 bp
<b>RefSeq ORF:</b>	462 bp
<b>Locus ID:</b>	3565
<b>UniProt ID:</b>	<a href="#">P05112</a>
<b>Cytogenetics:</b>	5q31.1
<b>Protein Families:</b>	Druggable Genome, Secreted Protein
<b>Protein Pathways:</b>	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

**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. IL4 is considered an important cytokine for tissue repair, counterbalancing the effects of proinflammatory type 1 cytokines, however, it also promotes allergic airway inflammation. Moreover, IL-4, a type 2 cytokine, mediates and regulates a variety of human host responses such as allergic, anti-parasitic, wound healing, and acute inflammation. This cytokine has been reported to promote resolution of neutrophil-mediated acute lung injury. In an allergic response, IL-4 has an essential role in the production of allergen-specific immunoglobulin (Ig) E. This pro-inflammatory cytokine has been observed to be increased in COVID-19 (Coronavirus disease 2019) patients, but is not necessarily associated with severe COVID-19 pathology. Two alternatively spliced transcript variants of this gene encoding distinct isoforms have been reported. [provided by RefSeq, Aug 2020]

Transcript Variant: This variant (1) encodes the longest isoform (1).