

Product datasheet for **SC126145**

IL7 (NM_000880) Human Untagged Clone

Product data:

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| Product Type: | Expression Plasmids |
| Product Name: | IL7 (NM_000880) Human Untagged Clone |
| Tag: | Tag Free |
| Symbol: | IL7 |
| Synonyms: | IL-7 |
| Mammalian Cell Selection: | None |
| Vector: | <u>pCMV6-XL5</u> |
| E. coli Selection: | Ampicillin (100 ug/mL) |



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Fully Sequenced ORF:

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>OriGene sequence for NM_000880 edited
ACGCCTCCTTGGTGTCGTCGCCCTTCCAATAACCCAGCTTGCCTGCACACTTGTGGCT
TCCGTGCACACATTAACAACCTCATGGTTCTAGCTCCCAGTCGCCAAGCGTTGCCAAGGCG
TTGAGAGATCATCTGGGAAGTCTTTTACCAGAATTGCTTTGATTCAGGCCAGCTGGTTT
TTCCTGCGGTGATTCCGAAATTCGCGAATTCCTCTGGTCTCATCCAGGTGCGCGGGAAG
CAGGTGCCCAGGAGAGAGGGGATAATGAAGATTCATGCTGATGATCCCAAAGATTGAAC
CTGCAGACCAAGCGCAAAGTAGAACTGAAAGTACACTGCTGGCGGATCCTACGGAAGTT
ATGGAAAAGGCAAAGCGCAGAGCCAGCCGTAGTGTGTGCCGCCCCCTTGGGATGGATG
AAACTGCAGTCGCGCGTGGGTAAAGAGAACAGCTGCAGAGATCACCTGCCAACACA
GACTCGGCAACTCCGCGGAAGACCAGGGTCTGGGAGTACTATGGGCGGTGAGAGCTTG
CTCCTGCTCCAGTTGCGGTATCATGACTACGCCCGCCTCCCGCAGACCATGTTCCATGT
TTCTTTTAGGTATATCTTTGGACTTCTCCCTGATCCTTGTCTGTTGCCAGTAGCATC
ATCTGATTGTGATATTGAAGTAAAGATGGCAAACAATATGAGAGTGTCTAATGGTCAG
CATCGATCAATTATTGGACAGCATGAAAGAAATGGTAGCAATTGCCTGAATAATGAATT
TAACTTTTTTAAAGACATATCTGTGATGCTAATAAGGAAGGTATGTTTTTATTCCGTGC
TGCTCGCAAGTTGAGGCAATTTCTTAAATGAATAGCACTGGTGTATTTGATCTCCACTT
ATTAAGGTTTCAGAAGGCACAACAATACTGTTGAACTGCACTGGCCAGGTTAAAGGAAG
AAAACCAGCTGCCTGGGTGAAGCCCAACCAACAAGAGTTTGGAAAGAAAATAAATCTTT
AAAGGAACAGAAAAAACTGAATGACTTGTGTTTCTAAAGAGACTATTACAAGAGATAAA
AACTTGTGGAATAAAATTTTGTAGGGCACTAAAGAACTGAAAAATATGGAGTGGCAA
TATAGAAACACGAACTTTAGCTGCATCCTCCAAGAATCTATCTGCTTATGCAGTTTTTCA
GAGTGAATGCTTCTTAGAAGTTACTGAATGCACCATGGTCAAACGGATTAGGGCATT
GAGAAATGCATATTGTATTACTAGAAGATGAATACAAACAATGGAACTGAATGCTCCAG
TCAACAAACTATTTCTTATATATGTGAACATTTATCAATCAGTATAATTCTGTACTGATT
TTTGTAAGACAATCCATGTAAGGTATCAGTTGCAATAATACTTCTCAAACCTGTTTAAAT
ATTTCAAGACATTAATCTATGAAGTATAAATGGTTTCAAAGATTCAAATTTGACATTG
CTTTACTGTCAAATAATTTTATGGCTCACTATGAATCTATTATACTGTATTAAGAGTGA
AAATTGCTTCTCTGTGCTGGAGATGTTTTAGAGTTAACAATGATATATGGATAATGCC
GGTGAGAATAAGAGAGTCATAAACCTTAAGTAAGCAACAGCATAACAAGGTCCAAGATA
CTAAAAGAGATTTCAAGAGATTTAATTAATCATGAATGTGTAACACAGTGCCTTCAATA
ATGGTATAGCAAATGTTTTGACATGAAAAAAGGACAATTTCAAAAAAATAAAATAAAATA
AAAATAAATTCACCTAGTCTAAGGATGCTAAACCTTAGTACTGAGTTACATTGTCATTTA
TATAGATTATAACTTGTCTAAATAAGTTTGAATTTGGGAGATATATTTTAAAGATAATA
ATATATGTTTACCTTTAATTAATGAAATATCTGTATTTAATTTTACTATATCTGTA
TATAAAATATTTTCATACAGCATTACAAATGCTTACTTTGGAATACATTTCTCCTTTGA
TAAATAAATGAGCTATGTATTAATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAA
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| 5' Read Nucleotide Sequence: | >OriGene 5' read for NM_000880 unedited NNNNCCGGGCAAATTTGTATACGACTCACTATAGGCGGCCGGAATCAGATCTGGTACC GGTCCGGAATCCCGGNAACGCCTCCTTGGTGTCTGTCGCTTCCAATAACCCAGCTTGC GTCCTGCACACTTGTGGCTTCCGTGCACACATTAACAACATCATGGTTCTAGTCCCAGTC GCCAAGCGTTGCCAAGCGTTGAGAGATCATCTGGGAAGTCTTTACCCAGAATTGCTTT GATTCAGGCCAGCTGGTTTTCTGCGGTGATTCGAAAATTCGCGAATTCCTCTGGTCTT CATCCAGGTGCGCGGAAGCAGGTGCCCAGGAGAGAGGGGATAATGAAGATTCCATGCTG ATGATCCCAAAGATTGAACCTGCAGACCAAGCGCAAAGTAGAACTGAAAGTACACTGCT GGCGGATCCTACGGAAGTTATGGAAAAGCAAAGCGCAGAGCCACGCCGTAGTGTGTGCC GCCCCCTTGGGATGGATGAACTGCAGTCGCGCGTGGGTAAGAGGAACCCAGCTGCAGA GATCACCTGCCAACACAGACTCGGCAACTCCGCGGAAGACCAGGGTCTGGGAGTGAC TATGGCGGTGAGAGCTTGCTCCTGCTCCAGTTGCGGTTCATCATGACTACGCCCGCTCC CGCAGACCATGTTCCATGTTCTTTTAGGTATATCTTTGGACTTCTCCCTGATCCTTG TTCTGTTGCCAGTAGCATCATCTGATTGTGATATTGAAGGTAAAGATGGCAAACAATATG AGAGTGTCTAATGGTCAGCATCGATCAATTATTGGACAGCATGAAAGAATTGGTACGCA TTGCCTGAATATGAATTAACA |
| Restriction Sites: | NotI-NotI |
| ACCN: | NM_000880 |
| OTI Disclaimer: | Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP). |
| 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: | <ol style="list-style-type: none"> 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. |
| RefSeq: | <u>NM_000880.2</u> , <u>NP_000871.1</u> |
| RefSeq Size: | 2116 bp |
| RefSeq ORF: | 534 bp |
| Locus ID: | 3574 |
| UniProt ID: | <u>P13232</u> |
| Cytogenetics: | 8q21.13 |
| Protein Families: | Druggable Genome, Secreted Protein |
| Protein Pathways: | Cytokine-cytokine receptor interaction, Hematopoietic cell lineage, Jak-STAT signaling pathway |

Gene Summary:

The protein encoded by this gene is a cytokine important for B and T cell development. This cytokine and the hepatocyte growth factor (HGF) form a heterodimer that functions as a pre-pro-B cell growth-stimulating factor. IL7 is found to be a cofactor for V(D)J rearrangement of the T cell receptor beta (TCRB) during early T cell development. This cytokine can be produced locally by intestinal epithelial and epithelial goblet cells, and may serve as a regulatory factor for intestinal mucosal lymphocytes. IL7 plays an essential role in lymphoid cell survival, and in the maintenance of naive and memory T cells. Alternative splicing results in multiple transcript variants encoding distinct isoforms. Additional splice variants have been described but their presence in normal tissues has not been confirmed. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection can be a potent inducer of proinflammatory cytokines and chemokines which may defend against the infection, but may also mediate destructive lung injury. Elevated serum IL7 levels, together with several other circulating cytokines and chemokines, has been found to be associated with the severity of Coronavirus Disease 19 (COVID-19). [provided by RefSeq, Jul 2020]

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