

## Product datasheet for **RG208274**

### IL7 (NM\_000880) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** IL7 (NM\_000880) Human Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** IL7  
**Synonyms:** IL-7  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >RG208274 representing NM\_000880  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGTTCCATGTTCTTTTAGGTATATCTTTGGACTTCCTCCCCTGATCCTTGTCTGTTGCCAGTAGCAT  
 CATCTGATTGTGATATTGAAGGTAAGATGGCAAACAATATGAGAGTGTCTAATGGTCAGCATCGATCA  
 ATTATTGGACAGCATGAAAGAAATTGGTAGCAATTGCCTGAATAATGAATTTAACTTTTTAAAAGACAT  
 ATCTGTGATGCTAATAAGGAAGGTATGTTTTATTCCGTGCTGCTCGCAAGTTGAGGCAATTTCTAAAA  
 TGATAGCACTGGTGATTTTGTCTCCACTTATTTAAAAGTTTCAGAAGGCACAACAATACTGTTGAAGT  
 CACTGGCCAGGTTAAAGGAAGAAAACCAGCTGCCCTGGGTGAAGCCAACCAACAAGAGTTTGAAGAA  
 AATAAATCTTTAAAGGAACAGAAAAACTGAATGACTTGTGTTTCCTAAAGAGACTATTACAAGAGATAA  
 AAAGTTGTTGGAATAAAATTTTGTGGGCACTAAAGAACAC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG208274 representing NM\_000880  
 Red=Cloning site Green=Tags(s)

MFHVSFRYIFGLPPLILVLLPVASSDCDIEGKDGKQYESVLMVSIQQLDSMKEIGSNCLNNEFNFFKRH  
 ICDANKEGMFLFRAARKLRQFLKMNSTGDFDLHLLKVSEGTTILLNCTGQVKGRKPAALGEAQPTKSLEE  
 NKSLKEQKLNLCFLKRLLEIKTCWNKILMGTKEH

**TRTRPLE** - GFP Tag - V

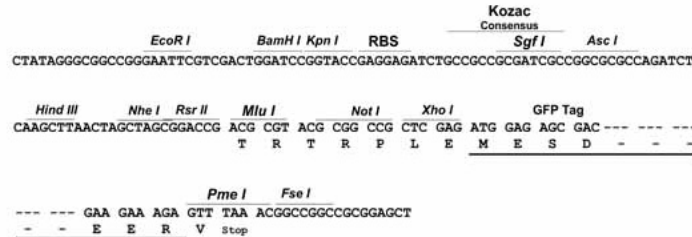
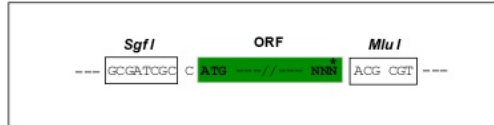
**Restriction Sites:** Sgfl-MluI



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**Cloning Scheme:**

Cloning sites used for ORF Shutting:



<b>ACCN:</b>	NM_000880
<b>ORF Size:</b>	531 bp
<b>OTI Disclaimer:</b>	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>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<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>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<a href="#">NM_000880.4</a>
<b>RefSeq Size:</b>	2116 bp
<b>RefSeq ORF:</b>	534 bp
<b>Locus ID:</b>	3574

UniProt ID: [P13232](#)

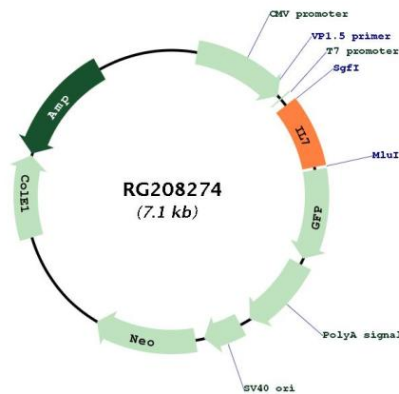
Cytogenetics: 8q21.13

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]

### Product images:



Circular map for RG208274