

Product datasheet for **RG231688**

IL7 (NM_001199888) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: IL7 (NM_001199888) 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: >RG231688 representing NM_001199888
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGTTCCATGTTCTTTTAGGTATATCTTTGGACTTCCTCCCCTGATCCTTGTTCTGTTGCCAGTAGCAT
CATCTGATTGTGATATTGAAGGTAAGATGGCAAACAATGAGAGTGTCTAATGGTCAGCATCGATCA
ATTATTGGACAGCATGAAAGAAATTGGTAGCAATTGCCTGAATAATGAATTTAACTTTTTAAAAGACAT
ATCTGTGATGCTAATAAGGAAGAAAATAAATCTTTAAAGGAACAGAAAAAAGTGAATGACTTGTGTTCC
TAAAGAGACTATTACAAGAGATAAAAACCTGTTGGAATAAAATTTGATGGGCACTAAAGAACAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG231688 representing NM_001199888
Red=Cloning site Green=Tags(s)
MFHVSFRYIFGLPPLILVLLPVASSDCDIEGKDGKQYESVLMVSIQDQLLDSMKEIGSNCLNNEFNFFKRH
ICDANKEENKSLKEQKLNLDLFLKRLLEIKTCWNKILMGTKEH

TRTRPLE - GFP Tag - V

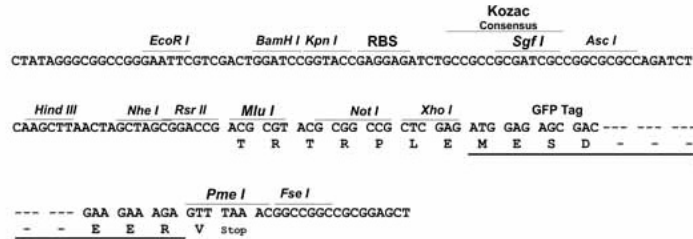
Restriction Sites: Sgfl-MluI



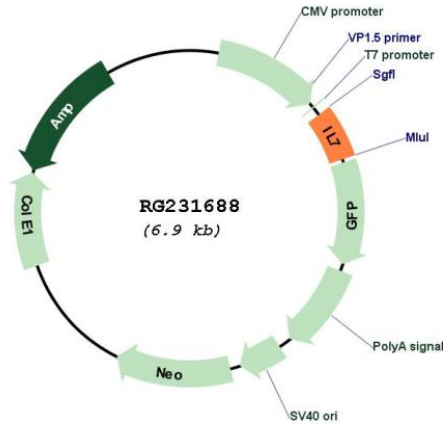
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Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM_001199888

ORF Size: 345 bp

OTI Disclaimer:	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 custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.
	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:	<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:	NM_001199888.1 , NP_001186817.1
RefSeq Size:	1903 bp
RefSeq ORF:	348 bp
Locus ID:	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]