

## Product datasheet for **SC322061**

### GM CSF (CSF2) (NM\_000758) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	GM CSF (CSF2) (NM_000758) Human Untagged Clone
Tag:	Tag Free
Symbol:	GM CSF
Synonyms:	CSF; GMCSF
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_000758, the custom clone sequence may differ by one or more nucleotides

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ATGTGGCTGCAGAGCCTGCTGCTCTTGGGCACTGTGGCCTGCAGCATCTCTGCACCCGCCGCTCGCCCA
GCCCCAGCACGCAGCCCTGGGAGCATGTGAATGCCATCCAGGAGGCCGGCGTCTCCTGAACCTGAGTAG
AGACACTGCTGCTGAGATGAATGAAACAGTAGAAGTCATCTCAGAAATGTTTGACCTCCAGGAGCCGACC
TGCCTACAGACCCGCTGGAGCTGTACAAGCAGGGCCTGCGGGGCAGCCTCACCAAGCTCAAGGGCCCT
TGACCATGATGGCCAGCCACTACAAGCAGCACTGCCCTCAACCCGGAACTTCTGTGCAACCCAGAT
TATCACCTTTGAAAGTTTCAAAGAGAACCTGAAGGACTTCTGCTTGTCATCCCCTTTGACTGCTGGGAG
CCAGTCCAGGAGTGA
```

Restriction Sites:	Please inquire
ACCN:	NM_000758



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<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>	<p>This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.</p>
<b>Components:</b>	<p>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).</p>
<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_000758.2</a> , <a href="#">NP_000749.2</a>
<b>RefSeq Size:</b>	781 bp
<b>RefSeq ORF:</b>	435 bp
<b>Locus ID:</b>	1437
<b>UniProt ID:</b>	<a href="#">P04141</a>
<b>Cytogenetics:</b>	5q31.1
<b>Protein Families:</b>	Druggable Genome, ES Cell Differentiation/IPS, Secreted Protein
<b>Protein Pathways:</b>	Cytokine-cytokine receptor interaction, Fc epsilon RI signaling pathway, Hematopoietic cell lineage, Jak-STAT signaling pathway, Natural killer cell mediated cytotoxicity, T cell receptor signaling pathway

**Gene Summary:**

The protein encoded by this gene is a cytokine that controls the production, differentiation, and function of granulocytes and macrophages. The active form of the protein is found extracellularly as a homodimer. This gene has been localized to a cluster of related genes at chromosome region 5q31, which is known to be associated with interstitial deletions in the 5q- syndrome and acute myelogenous leukemia. Other genes in the cluster include those encoding interleukins 4, 5, and 13. This gene plays a role in promoting tissue inflammation. Elevated levels of cytokines, including the one produced by this gene, have been detected in SARS-CoV-2 infected patients that develop acute respiratory distress syndrome. Mice deficient in this gene or its receptor develop pulmonary alveolar proteinosis. [provided by RefSeq, Aug 2020]