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Product datasheet for RC211109

GM CSF (CSF2) (NM_000758) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GM CSF (CSF2) (NM_000758) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GM CSF
Synonyms:	CSF; GMCSF
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC211109 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTGGCTGCAGAGCCTGCTGCTCTTGGGCACTGTGGCCTGCAGCATCTCTGCACCCGCCCGCTCGCCCA
GCCCCAGCACGCAGCCCTGGGAGCATGTGAATGCCATCCAGGAGGCCCGGCGTCTCCTGAACCTGAGTAG
AGACACTGCTGCTGAGATGAATGAAACAGTAGAAGTCATCTCAGAAATGTTTGACCTCCAGGAGCCGACC
TGCCTACAGACCCGCCTGGAGCTGTACAAGCAGGGCCTGCGGGGCAGCCTCACCAAGCTCAAGGGCCCCT
TGACCATGATGGCCAGCCACTACAAGCAGCACTGCCCTCCAACCCCGGAAACTTCCTGTGCAACCCAGAT
TATCACCTTTGAAAGTTTCAAAGAGAACCTGAAGGACTTTCTGCTTGTCATCCCCTTTGACTGCTGGGAG
CCAGTCCAGGAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC211109 protein sequence
Red=Cloning site Green=Tags(s)

MWLQSLLLLGTVACSISAPARSPSPSTQPWEHVNAIQEARRLLNLSRDTAAEMNETVEVISEMFDLQEPT
CLQTRLELYKQGLRGSLTKLKGPLTMMASHYKQHCPPTPETSCATQIITFESFKENLKDFLLVIPFDCWE
PVQE

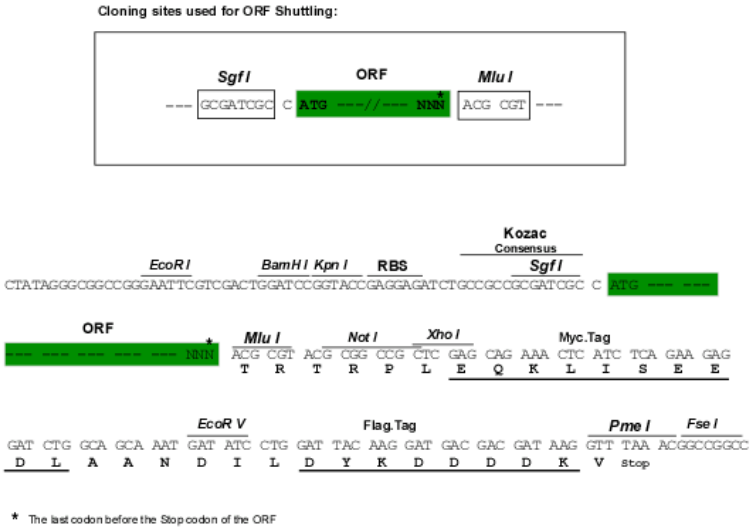
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6006_d12.zip

View online »

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_000758

ORF Size: 432 bp

OTI Disclaimer: 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:
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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

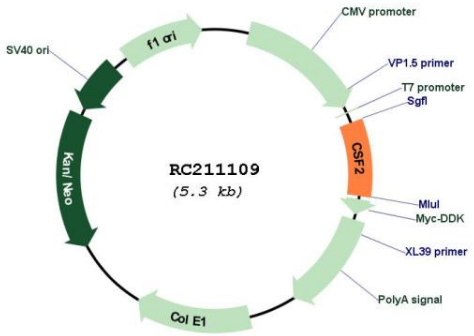
RefSeq: NM_000758.4

RefSeq Size: 800 bp

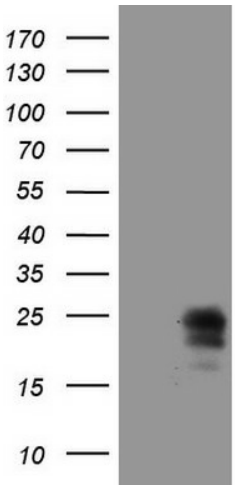
RefSeq ORF: 435 bp

Locus ID:	1437
UniProt ID:	P04141
Cytogenetics:	5q31.1
Protein Families:	Druggable Genome, ES Cell Differentiation/IPS, Secreted Protein
Protein Pathways:	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
MW:	16.3 kDa
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]

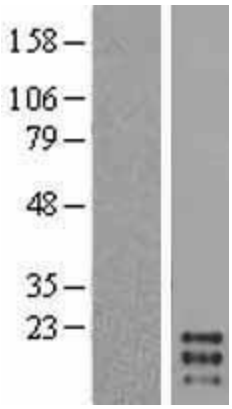
Product images:



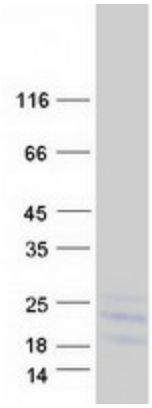
Circular map for RC211109



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY CSF2 (Cat# RC211109, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-CSF2 (Cat# [TA808009])(1:2000). Positive lysates [LY400257] (100ug) and [LC400257] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY400257]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC211109 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CSF2 protein (Cat# [TP311109]). The protein was produced from HEK293T cells transfected with CSF2 cDNA clone (Cat# RC211109) using MegaTran 2.0 (Cat# [TT210002]).