

## Product datasheet for **RC209993**

### Interferon gamma (IFNG) (NM\_000619) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Interferon gamma (IFNG) (NM\_000619) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Interferon gamma  
**Synonyms:** IFG; IFI; IMD69  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >RC209993 ORF sequence  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGAAATATAACAAGTTATATCTTGGCTTTTCAGCTCTGCATCGTTTTGGTTCTCTTGGCTGTTACTGCC  
AGGACCCATATGTAAGAAGCAGAAAACCTTAAGAAATATTTTAAATGCAGGTCATTGAGATGTAGCGGA  
TAATGGAAGCTCTTTTCTAGGCATTTTGAAGAATTGGAAAGAGGAGAGTGACAGAAAAAATGCAGAGC  
CAAATTGTCTCCTTTTACTTCAAACTTTTTAAAACTTTAAAGATGACCAGAGCATCCAAAAGAGTGTGG  
AGACCATCAAGGAAGACATGAATGTCAAGTTTTTCAATAGCAACAAAAAGAAACGAGATGACTTCGAAAA  
GCTGACTAATTATTCGGTAACTGACTTGAATGTCCAACGCAAAGCAATACATGAACCTCATCAAGTGATG  
GCTGAACTGTCCGACGAGCTAAAACAGGGAAGCGAAAAAGGAGTCAGATGCTGTTTCGAGGTCAAGAG  
CATCCAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC209993 protein sequence  
Red=Cloning site Green=Tags(s)  
MKYTSYILAFQLCIVLGSGLGCYQDPYVKEAENLKKYFNAGHSDVADNGTLFLGILKNWKEESDRKIMQS  
QIVSFYFKLFKNFKDDQSIQKSVETIKEDMNVKFFNSNKKKRDDFEKLTNYSVTDLNVQRKAIHEL IQVM  
AELSPAAGTGRKRKRSQMLFRGRRASQ

**TRTRPLEQKLISEEDLAANDILDYKDDDDKV**

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6070\\_g12.zip](https://cdn.origene.com/chromatograms/mk6070_g12.zip)



**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_000619

**ORF Size:** 498 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.

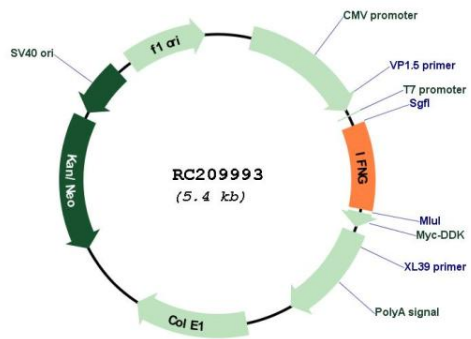
**RefSeq:** [NM\\_000619.3](#)

**RefSeq Size:** 1240 bp

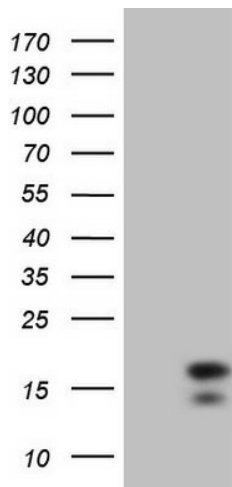
**RefSeq ORF:** 501 bp

**Locus ID:** 3458  
**UniProt ID:** [P01579](#)  
**Cytogenetics:** 12q15  
**Protein Families:** Druggable Genome, Secreted Protein  
**Protein Pathways:** Allograft rejection, Cytokine-cytokine receptor interaction, Graft-versus-host disease, Jak-STAT signaling pathway, Natural killer cell mediated cytotoxicity, Proteasome, Regulation of autophagy, Systemic lupus erythematosus, T cell receptor signaling pathway, TGF-beta signaling pathway, Type I diabetes mellitus  
**MW:** 19.3 kDa  
**Gene Summary:** This gene encodes a soluble cytokine that is a member of the type II interferon class. The encoded protein is secreted by cells of both the innate and adaptive immune systems. The active protein is a homodimer that binds to the interferon gamma receptor which triggers a cellular response to viral and microbial infections. Mutations in this gene are associated with an increased susceptibility to viral, bacterial and parasitic infections and to several autoimmune diseases. [provided by RefSeq, Dec 2015]

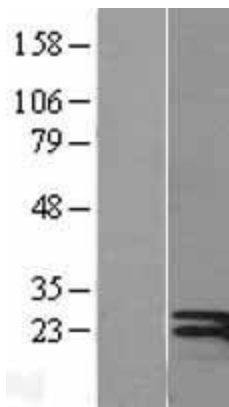
**Product images:**



Circular map for RC209993



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY IFNG (Cat# RC209993, 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-IFNG (Cat# [TA805798]). Positive lysates [LY400207] (100ug) and [LC400207] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY400207]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC209993 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified IFNG protein (Cat# [TP309993]). The protein was produced from HEK293T cells transfected with IFNG cDNA clone (Cat# RC209993) using MegaTran 2.0 (Cat# [TT210002]).