

## Product datasheet for **RC216094**

### **NCF4 (NM\_000631) Human Tagged ORF Clone**

#### Product data:

Product Type:	Expression Plasmids
Product Name:	NCF4 (NM_000631) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	NCF4
Synonyms:	CGD3; NCF; P40PHOX; SH3PXD4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC216094 representing NM_000631 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCTGTGGCCAGCAGCTGCGGGCCGAGAGTGACTTTGAACAGCTTCCGGATGATGTTGCCATCTCGG  
CCAACATTGCTGACATCGAGGAGAAGAGAGGCTTCACCAGCCACTTTGTTTTGTCATCGAGGTGAAGAC  
AAAAGGAGGATCCAAGTACCTCATCTACCGCCGCTACCGCCAGTCCATGCTTTGCAGAGCAAGCTGGAG  
GAGCGCTTCGGGCCAGACAGCAAGAGCAGTGCCCTGGCCTGTACCCTGCCCACTCCAGCCAAAGTCT  
ACGTGGGTGTGAACAGGAGATCGCCGAGATGCGGATACCTGCCCTCAACGCCTACATGAAGAGCCTGCT  
CAGCCTGCCGGTCTGGGTGCTGATGGATGAGGACGTCCGGATCTTCTTTTACCAGTCGCCCTATGACTCA  
GAGCAGGTGCCCCAGGCACTCCGCCGGTCCGCCCGCGCACCCGAAAGTCAAGAGCGTGTCCCCACAGG  
GCAACAGCGTTGACCGCATGGCAGCTCCGAGAGCAGAGGCTCTATTTGACTTCACTGAAACAGCAAAT  
GGAGCTGAATTTCAAAGCTGGAGATGTGATCTTCCTCCTCAGTCGGATCAACAAAGACTGGCTGGAGGGC  
ACTGTCCGGGGAGCCACGGGCATCTTCCTCTCTCCTTCGTGAAGATCCTCAAAGACTTCCTGAGGAGG  
ACGACCCCACTGGCTGCGTTGCTACTACTACGAAGACCATCAGCACCATCAAGGACATCGCGGT  
GGAGGAAGATCTCAGCAGCACTCCCTATTGAAAGACCTGCTGGAGCTCACAAGGCGGGAGTTCCAGAGA  
GAGGACATAGCTCTGAATTACCGGACGCTGAGGGGATCTGGTTCGGCTGCTGCGATGAGGACGTAG  
CGTCATGGTGCGCAGGCTCGTGGCCTCCCTCCCAGAAGCGCCTCTTCCCCTGGAAGTGCACATCAC  
GCAGAAGGACAACACAGGGTCTACAACACGATGCCA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC216094 representing NM\_000631  
 Red=Cloning site Green=Tags(s)

MAVAQQLRAESDFEQLPDDVAISANIADIEEKGFTSHFVFVIEVKTKGGSKYLIYRRYQFHALQSKLE  
 ERFGPDSKSSALACTLPTLPAKVYVGKQEIEMRIPALNAYMKSLLSLPVWLMDEVDRIFFYQSPYDS  
 EQVPQALRRLRPRTRKVKSVSPQGNVDRMAAPRAEALFDTGNSKLELNFKAGDVIFLLSRINKDWLEG  
 TVRGATGIFPLSFVKILKDFPEEDDPTNWLRCYYYEDTISTIKDIAVEEDLSSTPLLKDLLELTRREFQR  
 EDIALNYRDAEGDLVRLLSDEDVALMVRQARGLPQKRLFPWKLHITQKDNYRVYNTMP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6484\\_b04.zip](https://cdn.origene.com/chromatograms/mk6484_b04.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_000631

**ORF Size:** 1017 bp

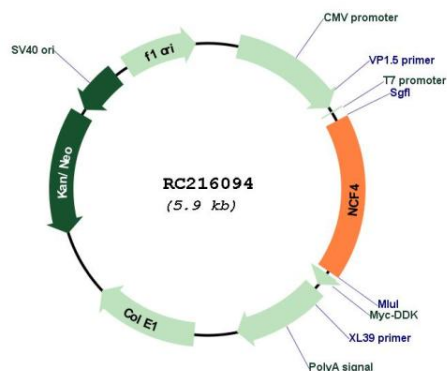
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone 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.

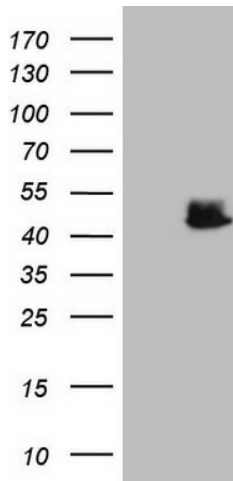
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

<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>	<u>NM_000631.5</u>
<b>RefSeq Size:</b>	1386 bp
<b>RefSeq ORF:</b>	1020 bp
<b>Locus ID:</b>	4689
<b>UniProt ID:</b>	<u>Q15080</u>
<b>Cytogenetics:</b>	22q12.3
<b>Domains:</b>	PB1, SH3, PX
<b>Protein Pathways:</b>	Leukocyte transendothelial migration
<b>MW:</b>	38.9 kDa
<b>Gene Summary:</b>	<p>The protein encoded by this gene is a cytosolic regulatory component of the superoxide-producing phagocyte NADPH-oxidase, a multicomponent enzyme system important for host defense. This protein is preferentially expressed in cells of myeloid lineage. It interacts primarily with neutrophil cytosolic factor 2 (NCF2/p67-phox) to form a complex with neutrophil cytosolic factor 1 (NCF1/p47-phox), which further interacts with the small G protein RAC1 and translocates to the membrane upon cell stimulation. This complex then activates flavocytochrome b, the membrane-integrated catalytic core of the enzyme system. The PX domain of this protein can bind phospholipid products of the PI(3) kinase, which suggests its role in PI(3) kinase-mediated signaling events. The phosphorylation of this protein was found to negatively regulate the enzyme activity. Alternatively spliced transcript variants encoding distinct isoforms have been observed. [provided by RefSeq, Jul 2008]</p>

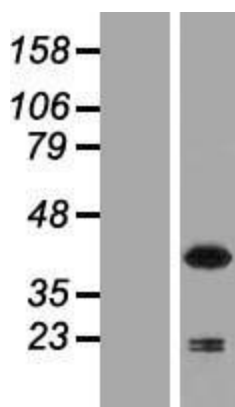
## Product images:



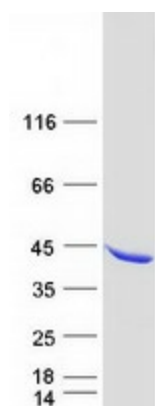
Circular map for RC216094



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY NCF4 (Cat# RC216094, 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-NCF4 (Cat# [TA809135])(1:2000). Positive lysates [LY424600] (100ug) and [LC424600] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY424600]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC216094 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified NCF4 protein (Cat# [TP316094]). The protein was produced from HEK293T cells transfected with NCF4 cDNA clone (Cat# RC216094) using MegaTran 2.0 (Cat# [TT210002]).