

## Product datasheet for **RC205080**

### Peroxiredoxin 3 (PRDX3) (NM\_006793) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Peroxiredoxin 3 (PRDX3) (NM_006793) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Peroxiredoxin 3
Synonyms:	AOP-1; AOP1; HBC189; MER5; PRO1748; prx-III; SP-22
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC205080 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCGGCTGCTGTAGGACGGTTGCTCCGAGCGTCGGTTGCCGACATGTGAGTGCCATTCCTTGGGGCA  
TTTCTGCCACTGCAGCCCTCAGGCCTGCTGCATGTGGAAGAACGAGCTTGACAAATTTATTGTGTTCTGG  
TTCCAGTCAAGCAAATTTATTCAGCACCAGTTCCTCATGCCATGCACCTGCTGTACCCAGCATGCACCC  
TATTTTAAAGGTACAGCCGTTGCAATGGAGAGTTCAAAGACCTAAGCCTTGATGACTTTAAGGGGAAAT  
ATTTGGTGCTTTTCTTCTATCCTTTGGATTTACCTTTGTGTCTACAGAAATGTTGCTTTTAGTGA  
CAAAGCTAACGAATTCACGATGTGAAGTGTGCGAGTCTCAGTGGATTTCCACTTTAGCCAT  
CTTGCCTGGATAAATACACCAAGGAAGAATGGTGGTTTGGGCCACATGAACATCGCACTCTTGTGCACT  
TAATAAGCAGATTTCCCGAGACTACGGTGTGCTGTTAGAAGTTCTGGTCTTGCCTAAGAGGTCTCTT  
CATAATTGACCCCAATGGAGTCAAGCATTTGAGCGTCAACGATCTCCAGTGGGCCGAAGCGTGGAA  
GAAACCTCCGCTTGGTGAAGCGTTCAGTATGTAGAAACACATGGAGAAGTCTGCCAGCGAAGTGGAA  
CACCGGATTCTCTACGATCAAGCCAAGTCCAGCTGCTTCAAAGAGTACTTTGAGAAGTAAATCAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC205080 protein sequence  
Red=Cloning site Green=Tags(s)

MAAAVGRLLRASVARHVS AIPWGISATAALRP AACGRTSLTNLLCSGSSQAKLFSTSSSCHAPAVTQHAP  
 YFKGTAVVNGEFKDLSDDFKGYLVLFFYPLDFTFVCPTEIVAFSDKANEFHVNCEVAVSVDSHFSH  
 LAWINTPRKNGGLGHMNIALLSDLTKQISR DYGVLLLEGSLALRGLFIIDPNGVIKHLVNDLPVGRSVE  
 ETLRLVKAFQYVETHGEVCPANWTPDSPTIKPSPAASKEYFQKVNQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6061\\_b10.zip](https://cdn.origene.com/chromatograms/mk6061_b10.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_006793

**ORF Size:** 768 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\\_006793.5](#)

**RefSeq Size:** 1641 bp

**RefSeq ORF:** 771 bp

**Locus ID:** 10935

**UniProt ID:** [P30048](#)

**Cytogenetics:** 10q26.11

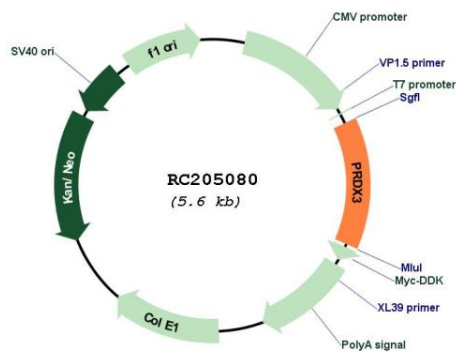
**Domains:** AhpC-TSA

**Protein Families:** Transcription Factors

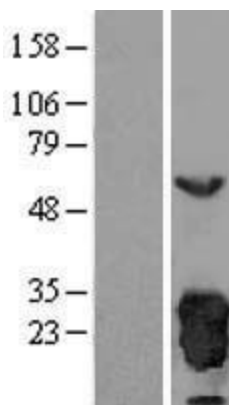
**MW:** 27.7 kDa

**Gene Summary:** This gene encodes a mitochondrial protein with antioxidant function. The protein is similar to the C22 subunit of Salmonella typhimurium alkylhydroperoxide reductase, and it can rescue bacterial resistance to alkylhydroperoxide in E. coli that lack the C22 subunit. The human and mouse genes are highly conserved, and they map to the regions syntenic between mouse and human chromosomes. Sequence comparisons with recently cloned mammalian homologs suggest that these genes consist of a family that is responsible for the regulation of cellular proliferation, differentiation and antioxidant functions. This family member can protect cells from oxidative stress, and it can promote cell survival in prostate cancer. Alternative splicing of this gene results in multiple transcript variants. Related pseudogenes have been identified on chromosomes 1, 3, 13 and 22. [provided by RefSeq, Oct 2014]

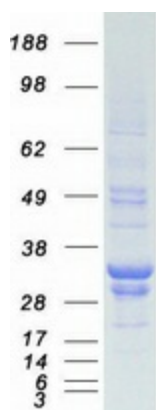
Product images:



Circular map for RC205080



Western blot validation of overexpression lysate (Cat# [LY416417]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC205080 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PRDX3 protein (Cat# [TP305080]). The protein was produced from HEK293T cells transfected with PRDX3 cDNA clone (Cat# RC205080) using MegaTran 2.0 (Cat# [TT210002]).