

Product datasheet for RC207413

Peroxiredoxin 2 (PRDX2) (NM_005809) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Peroxiredoxin 2 (PRDX2) (NM_005809) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: Peroxiredoxin 2
Synonyms: HEL-S-2a; NKEF-B; NKEFB; PRP; PRX2; PRXII; PTX1; TDPX1; TPX1; TSA
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >RC207413 representing NM_005809
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGCCTCCGGTAACGCGCGCATCGGAAAGCCAGCCCCTGACTTCAAGGCCACAGCGGTGGTTGATGGCG
 CCTTCAAAGAGGTGAAGCTGTCGGACTACAAGGGAAAGTACGTGGTCTCTTTTTCTACCCTCTGGACTT
 CACTTTTGTGTGCCCCACCGAGATCATCGGTTCCAGCAACCGTGCAGAGGACTTCCGAAGCTGGGCTGT
 GAAGTGTGGCGTCTCGGTGGACTCTCAGTTCACCCACCTGGCTTGATCAACACCCCCGAAAGAGG
 GAGGCTTGGGCCCCGTAACATCCCCCTGCTTGTGACGTGACCAGACGCTTGTCTGAGGATTACGGCGT
 GCTGAAAACAGATGAGGGCATTGCCTACAGGGGCCTTTATCATCGATGGCAAGGGTGTCTTCGCCAG
 ATCACTGTTAATGATTTGCCTGTGGGACGCTCCGTGGATGAGGCTCTGCGGCTGGTCCAGGCCTCCAGT
 ACACAGACGAGCATGGGGAAGTTTGTCCCCTGGCTGGAAGCCTGGCAGTGACACGATTAAGCCCAACGT
 GGATGACAGCAAGGAATATTTCTCCAACAACAAT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC207413 representing NM_005809
 Red=Cloning site Green=Tags(s)

MASGNARIGKPAPDFKATAVVDGAFKEVKLSDYKGYVVLFFYPLDFTFVCPTEIIAFSNRAEDFRKLG
 EVLGVSVDSQFTHLAWINTPRKEGGLGPLNIPLLADVTRRLSEDYGVLTDEGIAYRGLFIIDGKGLVRQ
 ITVNDLPVGRSVDEALRLVQAFQYTDHEGVEVCPAGWKPGSDTIKPNVDDSKKEYFSKHN

TRTRPLEQKLISEEDLAANDILDYKDDDDKV



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Chromatograms: https://cdn.origene.com/chromatograms/mg4394_e01.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_005809

ORF Size: 594 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.

RefSeq: [NM_005809.6](#)

RefSeq Size: 1039 bp

RefSeq ORF: 597 bp

Locus ID: 7001

UniProt ID: [P32119](#)

Cytogenetics: 19p13.13

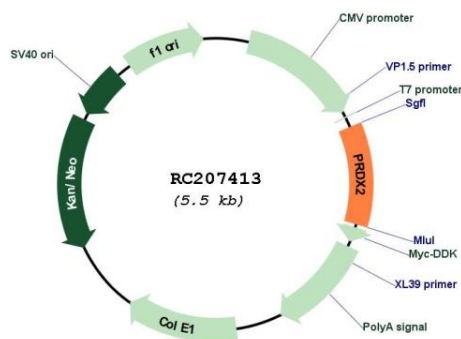
Domains: AhpC-TSA

Protein Families: Druggable Genome

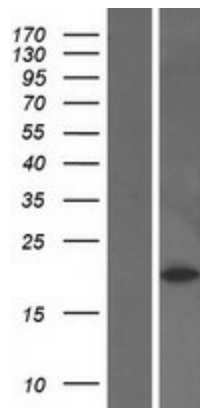
MW: 21.7 kDa

Gene Summary: This gene encodes a member of the peroxiredoxin family of antioxidant enzymes, which reduce hydrogen peroxide and alkyl hydroperoxides. The encoded protein plays an antioxidant protective role in cells, and it may contribute to the antiviral activity of CD8(+) T-cells. The crystal structure of this protein has been resolved to 2.7 angstroms. This protein prevents hemolytic anemia from oxidative stress by stabilizing hemoglobin, thus making this gene a therapeutic target for patients with hemolytic anemia. This protein may have a proliferative effect and play a role in cancer development or progression. Related pseudogenes have been identified on chromosomes 5, 6, 10 and 13. [provided by RefSeq, Mar 2013]

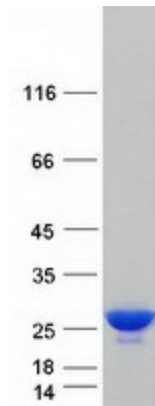
Product images:



Circular map for RC207413



Western blot validation of overexpression lysate (Cat# [LY417052]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207413 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PRDX2 protein (Cat# [TP307413]). The protein was produced from HEK293T cells transfected with PRDX2 cDNA clone (Cat# RC207413) using MegaTran 2.0 (Cat# [TT210002]).