

Product datasheet for **RC214863**

DPP1 (CTSC) (NM_001814) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	DPP1 (CTSC) (NM_001814) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CTSC
Synonyms:	CPPI; DPP-I; DPP1; DPPI; HMS; JP; JPD; PALS; PDON1; PLS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC214863 representing NM_001814
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGGTGCTGGGCCCTCCTTGCTGCTCGCCGCCCTCCTGCTGCTTCTCTCCGGCAGCGGCCGTGCGCT
 GCGACACACCTGCCAACTGCACCTATCTTGACCTGCTGGGCACCTGGGTCTTCCAGGTGGCTCCAGCGG
 TTCCACGCGGATGTCAACTGCTCGTTATGGGACCACAAGAAAAAAGTAGTGGTGTACCTTCAGAAG
 CTGGATACAGCATATGATGACCTTGCCAATTCTGGCCATTTACCATCATTTACAACCAAGGCTTTGAGA
 TTGTGTTGAATGACTACAAGTGGTTTGCCTTTTTTAAGTATAAAGAAGAGGGCAGCAAGGTGACCACTTA
 CTGCAACGAGACAATGACTGGTGGTGCATGATGTGTTGGGCCGGAAGTGGCTTGTTCACCGGAAAG
 AAGGTGGAACTGCCTCTGAGAATGTGTATGTCAACACAGCACACCTTAAGAATTCTCAGGAAAAGTATT
 CTAATAGGCTCTACAAGTATGATCAACTTTGTGAAAGCTATCAATGCCATTGAGAAGTCTGGACTGC
 AACTACATACATGGAATATGAGACTCTTACCCTGGGAGATATGATTAGGAGAAGTGGTGGCCACAGTCGA
 AAAATCCCAAGGCCAAACCTGCACCCTGACTGCTGAAATACAGCAAAAAGATTTTGCATTTGCCAACAT
 CTTGGGACTGGAGAAATGTTTCATGGTATCAATTTTGTGAGTCTGTTTCCGAAACCAAGCATCCTGTGGCAG
 CTGCTACTCATTGCTTCTATGGGTATGCTAGAAAGCGAGAATCCGTATACTAACCAACAATTCTCAGACC
 CCAATCCTAAGCCCTCAGGAGGTTGTGCTTGTAGCCAGTATGCTCAAGGCTGTGAAGGCCGCTTCCCAT
 ACCTTATTGCAGGAAAGTACGCCAAGATTTGGGCTGGTGAAGAAGCTTGCTTCCCCTACACAGGCAC
 TGATTCTCCATGCAAAAATGAAGGAAGACTGCTTTCGTTATTACTCCTCTGAGTACCACTATGTAGGAGGT
 TTCAATGGAGGCTGCAATGAAGCCCTGATGAAGCTTGAAGTGGTCCATCATGGGCCATGGCAGTTGCTT
 TTGAAGTATATGATGACTTCTCCACTACAAAAGGGGATCTACCACCACACTGGTCTAAGAGACCCCTT
 CAACCCCTTTGAGCTGACTAATCATGCTGTTCTGCTTGTGGGCTATGGCACTGACTCAGCCTCTGGGATG
 GATTACTGGATTGTTAAAAACAGCTGGGACCCGGCTGGGGTGAAGTGGCTACTTCCGGATCCGCAGAG
 GAACTGATGAGTGTGCAATTGAGAGCATAGCAGTGGCAGCCACACCAATTCCTAAATTG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC214863 representing NM_001814
 Red=Cloning site Green=Tags(s)

MGAGPSLLLAALLLLSGDGAVRCDTPANCTYLDLLGTWVFQVGSQSRDVNCSVMGPQEKKVVVYLQK
 LDTAYDDLGNLGHFTIIYNQGFIVLNDYKWFVFFKYKEEGSKVTTYCNETMTGWVHDLGRNWACFTGK
 KVGTASENVVNTAHLKNSQEKYSNRLKYDHNFKVAINAIQKSWTATTYMEYETLTLGDMIRRSVGGHSR
 KIPRPKPAPLTAETQKILHLPTSWDRNVHGINFVSPVRNQASCGSCYSFASMGMLEARIRILTNNSQT
 PILSPQEVVSCSYAQGCEGGFPYLIAGKYAQDFGLVEEACFPYTGTDSPCKMKEDCFRYSSEYHYVGG
 FYGGCNEALMKLELVHGHGPMVAFAFEVYDDFLHYKGIYHHTGLRDPFNPFLTNHAVLLVGYGTDASGM
 DWYIVKNSWGTGWGENGYFRIRRGTDCAIESIAVAATPIPKL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mg2657_g07.zip

Restriction Sites:

Sgfl-Mlul

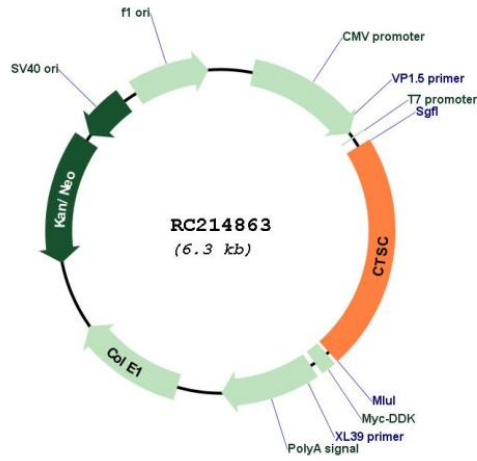
Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN: NM_001814
 ORF Size: 1389 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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_001814.5](#)

RefSeq Size: 1904 bp

RefSeq ORF: 1392 bp

Locus ID: 1075

UniProt ID: [P53634](#)

Cytogenetics: 11q14.2

Domains: Pept_C1

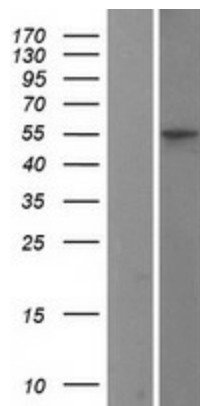
Protein Families: Druggable Genome, Protease

Protein Pathways: Lysosome

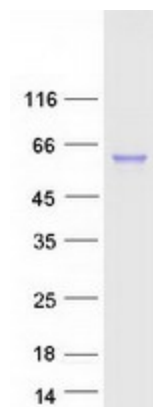
MW: 51.84 kDa

Gene Summary:

This gene encodes a member of the peptidase C1 family and lysosomal cysteine proteinase that appears to be a central coordinator for activation of many serine proteinases in cells of the immune system. Alternative splicing results in multiple transcript variants, at least one of which encodes a preproprotein that is proteolytically processed to generate heavy and light chains that form a disulfide-linked dimer. A portion of the propeptide acts as an intramolecular chaperone for the folding and stabilization of the mature enzyme. This enzyme requires chloride ions for activity and can degrade glucagon. Defects in the encoded protein have been shown to be a cause of Papillon-Lefevre syndrome, an autosomal recessive disorder characterized by palmoplantar keratosis and periodontitis. [provided by RefSeq, Nov 2015]

Product images:

Western blot validation of overexpression lysate (Cat# [LY400694]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC214863 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CTSC protein (Cat# [TP314863]). The protein was produced from HEK293T cells transfected with CTSC cDNA clone (Cat# RC214863) using MegaTran 2.0 (Cat# [TT210002]).