

Product datasheet for **RC213896**

SHP1 (PTPN6) (NM_002831) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SHP1 (PTPN6) (NM_002831) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SHP1
Synonyms:	HCP; HCPH; HPTP1C; PTP-1C; SH-PTP1; SHP-1; SHP-1L; SHP1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC213896 representing NM_002831
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGTGAGGTGGTTTCACCGAGACCTCAGTGGGCTGGATGCAGAGACCCTGCTCAAGGGCCGAGGTGTCC
 ACGGTAGCTTCTGGCTCGGCCAGTCGCAAGAACCAGGGTACTTCTCGCTCTCCGTCAGGGTGGGGGA
 TCAGGTGACCCATATTCGGATCCAGAACTCAGGGATTCTATGACCTGTATGGAGGGGAGAAGTTGCG
 ACTCTGACAGAGCTGGTGGAGTACTACACTCAGCAGCAGGGTGTCTGCAGGACCGCAGCGCACCATCA
 TCCACCTCAAGTACCCGCTGAAGTGTCTCCGATCCACTAGTGAGAGGTGGTACCATGGCCACATGTCTGG
 CGGGCAGGCAGAGACGCTGCTGCAGGCCAAGGGCGAGCCCTGGACGTTTCTTGTGCGTGAGAGCCTCAGC
 CAGCCTGGAGACTTCGTGCTTCTGTGCTCAGTGACCAGCCCAAGGCTGGCCAGGCTCCCCGCTCAGGG
 TCACCACATCAAGTTCATGTGCGAGGGTGGACGCTACACAGTGGTGGTTTGGAGACCTTCGACAGCCT
 CACGGACTGGTGGAGCATTTCAGAAGACGGGGATTGAGGAGCCTCAGCGCCTTTGTCTACCTCGCG
 CAGCCGTAATGCCACGAGGGTGAATGCGGCTGACATTGAGAACCGAGTGTGGAAGTGAACAAGAAGC
 AGGAGTCCGAGGATACAGCCAAGGCTGGCTTCTGGGAGGAGTTTGGAGTTTGCAGAAGCAGGAGGTGAA
 GAATTGCACAGCGTCTGGAAGGGCAGCGCCAGAGAACAAGGGCAAGAACCCTACAAGAACATTCTC
 CCCTTTGACCACAGCCGAGTGTCTGCAGGGACGGGACGTAACATCCCCGGTCCGACTACATCAATG
 CCAACTACATCAAGAACCAGCTGCTAGGCCCTGATGAGAACGCTAAGACCTACATCGCCAGCCAGGGCTG
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 ACCCGAGAGGTGGAGAAAGGCCGAACAATGCGTCCCATACTGGCCGAGGTGGGATGCAGCGTGCTT
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 CTCCCCGCTGGACAATGGAGACCTGATTCGGGAGATCTGGCATTACCAGTACCTGAGCTGGCCCGACAT
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 CATGCTCATGGAGAACATCTCCACCAAGGGCTGGACTGTGACATTGACATCCAGAAGACCATCCAGATG
 GTGCGGGCGCAGCGCTCGGGCATGGTGCAGACGGAGGCGCAGTACAAGTTCATCTACGTGGCCATCGCC
 AGTTCATTGAAACCACTAAGAAGAAGCTGGAGGTCTGCAGTGCAGAAGGGCCAGGAGTGGAGTACGG
 GAACATCACCTATCCCCAGCCATGAAGAATGCCATGCCAAGGCCTCCCGCACCTCGTCCAAACACAAG
 GAGGATGTGTATGAGAACCTGCACACTAAGAACAAGGGAGGAGAAAGTGAAGAAGCAGCGGTGAGCAG
 ACAAGGAGAAGAGCAAGGTTCCCTCAAGAGGAAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC213896 representing NM_002831
 Red=Cloning site Green=Tags(s)

MVRWFHRDLSGLDAETLLKGRGVHGSFLARPSRKNQGDLSL SVRVGDQVTHIRIQNSGDFYDLYGGEKFA
 TLTELVEYYTQQQVQLQDRDGTIIHLKYPLNCSPTSERWYHGHMSGGQAETLLQAKGEPWTFVRESLS
 QPGDFVLSVLSQPKAGPGSPLRVTHIKVMCEGGRYTVGGLETFDSLTDLVEHFKKTGIEEASGAFVYLR
 QPYATRVNAADIENRVLELNKKQESED TAKAGFWEEFESLQKQEVKNLHQRLLEGQRPENKGNRYKNIL
 PFDHSRVILQGRDSNIPGSDYINANYIKNQLLGPDENAKTYIASQGCLEATVNDVWQMAWQENSRIVMT
 TREVEKGRNKCVPYWPEVGMQRAYGYPYSVTNCGEHDTEYKLRRTLQVSPLDNGDLIREIWHYQYLSWPDH
 GVPSEPGVLSFLDQINQRQESLPHAGPIIVHCSAGIGRTGTIIVIDMLMENISTKGLDCDIDIQTIQM
 VRAQRSGMVQTEAQYKFIYVAIAQFIETTKKLEVLQSQKQSEYGNITYPPAMKNAHAKASRTSSKHK
 EDVYENLHTKNKREEKVKQRSADKEKSKGSLKRK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6045_d12.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_002831

ORF Size: 1785 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_002831.5](#)

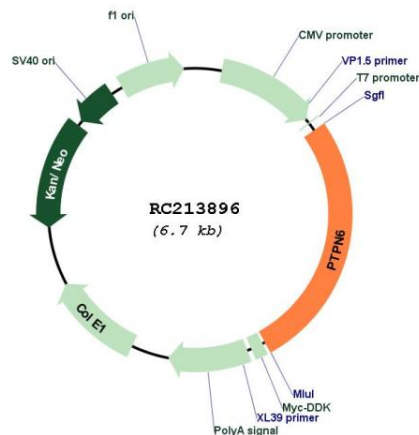
RefSeq Size: 2253 bp

RefSeq ORF: 1788 bp

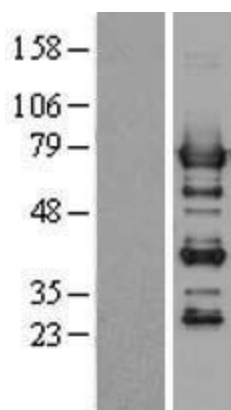
Locus ID: 5777

UniProt ID:	P29350
Cytogenetics:	12p13.31
Domains:	Y_phosphatase, SH2, PTPc_motif
Protein Families:	Druggable Genome, Phosphatase, Stem cell - Pluripotency
Protein Pathways:	Adherens junction, B cell receptor signaling pathway, Jak-STAT signaling pathway, Natural killer cell mediated cytotoxicity, T cell receptor signaling pathway
MW:	67.4 kDa
Gene Summary:	The protein encoded by this gene is a member of the protein tyrosine phosphatase (PTP) family. PTPs are known to be signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitotic cycle, and oncogenic transformation. N-terminal part of this PTP contains two tandem Src homolog (SH2) domains, which act as protein phospho-tyrosine binding domains, and mediate the interaction of this PTP with its substrates. This PTP is expressed primarily in hematopoietic cells, and functions as an important regulator of multiple signaling pathways in hematopoietic cells. This PTP has been shown to interact with, and dephosphorylate a wide spectrum of phospho-proteins involved in hematopoietic cell signaling. Multiple alternatively spliced variants of this gene, which encode distinct isoforms, have been reported. [provided by RefSeq, Jul 2008]

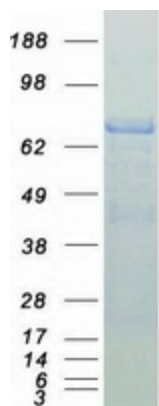
Product images:



Circular map for RC213896



Western blot validation of overexpression lysate (Cat# [LY401007]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC213896 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PTPN6 protein (Cat# [TP313896]). The protein was produced from HEK293T cells transfected with PTPN6 cDNA clone (Cat# RC213896) using MegaTran 2.0 (Cat# [TT210002]).