

## Product datasheet for **RG200728**

### **SHP1 (PTPN6) (NM\_080548) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	SHP1 (PTPN6) (NM_080548) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	SHP1
Synonyms:	HCP; HCPH; HPTP1C; PTP-1C; SH-PTP1; SHP-1; SHP-1L; SHP1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG200728 representing NM\_080548  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGCTGTCCCGTGGTGGTTTCACCGAGACCTCAGTGGGCTGGATGCAGAGACCCTGCTCAAGGGCCGAG  
 GTGTCCACGGTAGCTTCCTGGCTCGGCCAGTCGCAAGAACCAGGGTGACTTCTCGCTCTCCGTCAGGGT  
 GGGGATCAGGTACCCATATTCGGATCCAGAACTCAGGGGATTCTATGACCTGTATGGAGGGGAGAAG  
 TTTGCGACTCTGACAGAGCTGGTGGAGTACTACACTCAGCAGCAGGGTGTCTGCAGGACCGCAGCGCA  
 CCATCATCCACCTCAAGTACCCGCTGAAGTGTCCGATCCCACTAGTGAGAGGTGGTACCATGGCCACAT  
 GTCTGGCGGGCAGGCAGAGACGCTGCTGCAGGCCAAGGGCGAGCCCTGGACGTTTCTGTGCGTGAGAGC  
 CTCAGCCAGCCTGGAGACTTCGTGCTTTCTGTGCTCAGTGACCAGCCCAAGGCTGGCCAGGCTCCCCGC  
 TCAGGGTCACCCACATCAAGGTCATGTGCGAGGGTGGACGCTACACAGTGGTGGTTGGAGACCTTCGA  
 CAGCCTCAGGACCTGGTGGAGCATTTCAGAAGACGGGGATTGAGGAGGCTCAGCGCCTTTGTCTAC  
 CTGCGGCAGCCGACTATGCCACGAGGGTGAATGCGGGTACATTGAGAACCGAGTGTGGAAGTGAACA  
 AGAAGCAGGAGTCCGAGGATACAGCCAAGGCTGGCTTCTGGGAGGAGTTTGAGAGTTTGCAGAAGCAGGA  
 GGTGAAGAATTGACCACAGCGTCTGGAAGGGCAGCGGCCAGAGAACAAGGGAAGAACCCTACAAGAAC  
 ATCTCCCTTTGACCACAGCCGAGTGATCCTGCAGGGACGGGACAGTAACATCCCCGGTCCGACTACA  
 TCAATGCCAATACATCAAGAACCAGCTGCTAGGCCCTGATGAGAACGCTAAGACCTACATCGCCAGCCA  
 GGGCTGTCTGGAGGCCACGGTCAATGACTTCTGGCAGATGGCGTGGCAGGAGAACAGCCGTGTATCGTC  
 ATGACCACCCGAGAGGTGGAGAAAGGCCGAACAATGCGTCCCATACTGGCCGAGTGGGCATGCAGC  
 GTGCTTATGGCCCTACTCTGTGACCAACTCGGGGAGCATGACACAACCGAATACAACACTCCGTACCTT  
 ACAGGTCTCCCCGCTGGACAATGGAGACCTGATTCGGGAGATCTGGCATTACAGTACCTGAGCTGGCCC  
 GACCATGGGGTCCCCAGTGAGCCTGGGGTGTCTCAGCTTCTGGACCAGATCAACCAGCGCAGGAAA  
 GTCTGCCTCACGCAGGGCCATCATCGTGCAGTGCAGCGCCGCATCGGCCGCACAGGCACCATCATTGT  
 CATCGACATGCTCATGGAGAATCTCCACCAAGGGCCTGGACTGTGACATTGACATCCAGAAGACCATC  
 CAGATGGTGGGGCAGCGCTCGGGCATGGTGCAGACGGAGGCGCAGTACAAGTTTCTACTCGTGGCCA  
 TCGCCAGTTCATTGAAACCACTAAGAAGAAGCTGGAGGCTCAGTGCAGTGCAGAAGGGCCAGGAGTCGA  
 GTACGGGAACATCACCTATCCCCAGCCATGAAGAATGCCATGCCAAGGCTCCCGCACCTCGTCCAAA  
 CACAAGGAGGATGTGTATGAGAACCTGCACACTAAGAACAAGAGGGAGGAGAAAGTGAAGAAGCAGCGGT  
 CAGCAGACAAGGAGAAGCAAGGGTCCCTCAAGAGGAAG

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>RG200728 representing NM\_080548  
 Red=Cloning site Green=Tags(s)

MLSRGWFHRDLSGLDAETLLKGRGVHGSFLARPSRKNQGFSLSVRVGDQVTHIRIQNSGDFYDLYGGEK  
 FATLTELVEYYTQQQVQLQDRDGTIIHLKYPLNCSDPYSERWYHGHMSGQAETLLQAKGEPWTFVRES  
 LSQPGDFVLSVLSQPKAGPGSPLRVTHIKVMCEGGRYTVGGLETDFDSLTDLVEHFKKTGIEEASGAFVY  
 LRQPPYYATRVNAADIENRVLELNKKQESD TAKAGWEEFESLQKQEVKNLHQRLEGQRPENKGNRYKN  
 ILPFDHSRVILQGRDSNIPGSDYINANYIKNQLLGPDENAKTYIASQGCLEATVNDWFQMAWQENSRIIV  
 MTTREVEKGRNKCVPYWPEVGMQRAYGPYSVTNCGEHDTEYKLRTLQVSPLDNGDLIREIWHYQYLSWP  
 DHGVPSEPGVLSFLDQINQRQESLPHAGPIIVHCSAGIGRTGTIIVIDMLMENISTKGLDCDIDIQKTI  
 QMVRAQRSGMVQTEAQYKFIYVAIAQFIETTKKLEVLQSQKQGESEYGNITYPPAMKNAHAKASRTSSK  
 HKEDVYENLHTKNKREEKVKKQRSADKEKSKGSLKRR

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_080548

**ORF Size:** 1791 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\\_080548.4](#)

**RefSeq Size:** 2234 bp

**RefSeq ORF:** 1794 bp

**Locus ID:** 5777

**UniProt ID:** [P29350](#)

**Cytogenetics:** 12p13.31

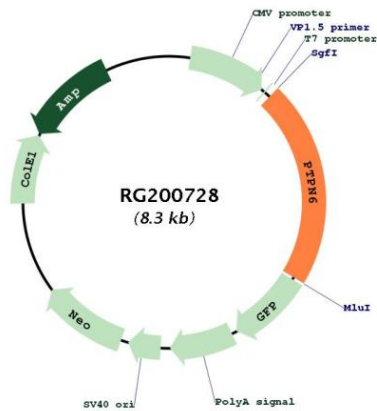
**Domains:** Y\_phosphatase, SH2

**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

**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 RG200728