

Product datasheet for **RC220029**

SHP2 (PTPN11) (NM_002834) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SHP2 (PTPN11) (NM_002834) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SHP2
Synonyms:	BPTP3; CFC; JMML; METCDS; NS1; PTP-1D; PTP2C; SH-PTP2; SH-PTP3; SHP2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC220029 representing NM_002834
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGACATCGCGGAGATGGTTTCACCCAAATATCACTGGTGTGGAGGCAGAAAACCTACTGTTGACAAGAG
 GAGTTGATGGCAGTTTTTTGGCAAGGCCTAGTAAAAGTAAACCCTGGAGACTTCACACTTTCCGTTAGAAG
 AAATGGAGCTGTCACCCACATCAAGATTAGAACACTGGTGATTACTATGACCTGTATGGAGGGGAGAAA
 TTTGCCACTTTGGCTGAGTTGGTCCAGTATTACATGGAACATCACGGGCAATTAAGAAGAGAAGATGGAG
 ATGTCATTGAGCTTAAATATCCTCTGAAGTGTGCAGATCTACCTCTGAAAGGTGGTTTCATGGACATCT
 CTCTGGGAAAGAAGCAGAGAAAATTATAACTGAAAAGGAAAACATGGTAGTTTTTCTGTACGAGAGAGC
 CAGAGCCACCCTGGAGATTTTGTCTTTCTGTGCGCACTGGTGTGACAAAGGGGAGAGCAATGACGGCA
 AGTCTAAAGTGACCCATGTTATGATTTCGTGTGAGCAACTGAAATACGACGTTGGTGGAGGAGAAGCGTT
 TGATTCTTTGACAGATCTTGTGGAACATTATAAGAAGAATCCTATGGTGGAAACATTGGGTACAGTACTA
 CAACTCAAGCAGCCCTAACACGACTCGTATAAATGCTGCTGAAATAGAAAGCAGAGTTGAGAACTAA
 GCAAAATTAGCTGAGACCACAGATAAAGTCAAACAGGCTTTTGGGAAGAATTTGAGACACTACAACAACA
 GGAGTGCAAACTTCTCTACAGCCGAAAAGAGGGTCAAAGGCAAGAAAACAAAAACAAAAATAGATATAAA
 AACATCCTGCCCTTTGATCATACCAGGGTTGTCCTACACGATGGTGTATCCCAATGAGCCTGTTTCAGATT
 ACATCAATGCAAAATATCATATGCTGAAATTTGAAACCAAGTGAACAATTCAAAGCCAAAAAGAGTTA
 CATTGCCACACAAGGCTGCCTGCAAAACACGGTGAATGACTTTTGGCGGATGGTGTCCAAGAAAACCTCC
 CGAGTGATTGTCATGACAACGAAAGAAGTGGAGAGAGGAAAGAGTAAATGTGTCAAATACTGGCCTGATG
 AGTATGCTCTAAAAGAATATGGCGTCATGCGTGTAGGAACGTCAAAGAAAAGCCGCTCATGACTATAAC
 GCTAAGAGAACCTAAACTTTCAAAGGTTGGACAAGGGAATACGGAGAGAACGGTCTGGCAATACCACTTT
 CGGACCTGGCCGACCACGGCGTCCCAGCGACCTGGGGCGTGTGGACTTCTGGAGGAGGTGCACC
 ATAAGCAGGAGAGCATCATGGATGCAGGGCCGGTGTGGTGCAGTGCAGTGTGGAATGGCCGGACAGG
 GACGTTCAATTGTGATTGATATTCTTATTGACATCATCAGAGAGAAAGGTGTTGACTGCGATATTGACGTT
 CCCAAAACCATCCAGATGGTGGGCTCAGAGGTGAGGGATGGTCCAGACAGAAGCACAGTACCGATTTA
 TCTATATGGCGGTCCAGCATTATATTGAAACACTACAGCGCAGGATTGAAGAAGAGCAGAAAAGCAAGAG
 GAAAGGGCACGAATATACAAATATTAAGTATTCTTAGCGGACCAGACGAGTGGAGATCAGAGCCCTCTC
 CGCCTTGTACTCAACGCCACCCTGTGCAGAAATGAGAGAAGACAGTGTAGAGTCTATGAAAACGTGG
 GCCTGATGCAACAGCAGAAAAGTTTCAGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC220029 representing NM_002834
 Red=Cloning site Green=Tags(s)

MTSRRWFHPNITGVEAENLLLTRGVDSFLARPSKSNPGDFTLSVRRNGAVTHIKIQNTGDYYDLYGGEK
 FATLAELVQYYMEHHGQLKEKNGDVIELKYPLNCADPTSERWFHGHLSGKEAEKLLTEKGKHSFLVRES
 QSHPGDFVLSVRTGDDKESNDGKSKVTHVMIRCQELKYDVGGGERFDSLTDLVEHYKKNPMVETLGTVL
 QLKQPLNTRINAAEIESRVREL SKLAETTDKVKQGFWEFETLQQQECKLLYSRKEGQRQENKNKNRYK
 NILPFDHTRVVLHDGDPNEPVS DYINANIIMPEFETKCNNSKPKKSYIATQGCLQNTVNDVFRMVFQENS
 RVIVMTTKEVERGKSKCVKYPDEYALKEYGVMRVRNVKESAAHDYTLRELKLSKVGQGNERTVWQYHF
 RTWPDHGVPSDPGGVLDLFEEVHHKQESIMDAGPVVHCSAGIGRTGTFIVIDILIDIIREKGVDCIDIV
 PKTIQMVRSQRS GMVQTEAQYRFIYMAVQHYIETLQRRIEEEQKSKRKGHEYTNIKYSLADQTSGDQSP
 LPCTPTPPCAEMREDSARVYENVGLMQQKQSF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:


ACCN: NM_002834

ORF Size: 1779 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_002834.5](#)

RefSeq Size: 6300 bp

RefSeq ORF: 1782 bp

Locus ID: 5781

UniProt ID: [Q06124](#)

Cytogenetics: 12q24.13

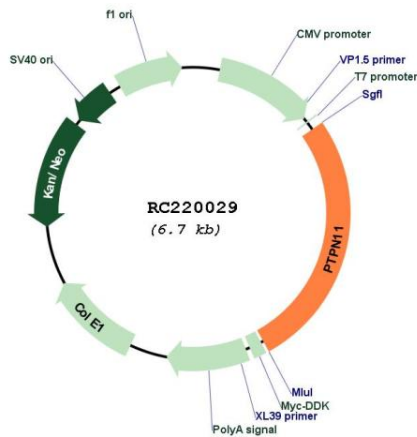
Protein Families: Druggable Genome, Phosphatase

Protein Pathways: Adipocytokine signaling pathway, Chronic myeloid leukemia, Epithelial cell signaling in Helicobacter pylori infection, Jak-STAT signaling pathway, Leukocyte transendothelial migration, Natural killer cell mediated cytotoxicity, Neurotrophin signaling pathway, Renal cell carcinoma

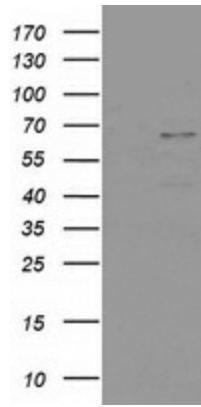
MW: 67.8 kDa

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. This PTP contains two tandem Src homology-2 domains, which function as phospho-tyrosine binding domains and mediate the interaction of this PTP with its substrates. This PTP is widely expressed in most tissues and plays a regulatory role in various cell signaling events that are important for a diversity of cell functions, such as mitogenic activation, metabolic control, transcription regulation, and cell migration. Mutations in this gene are a cause of Noonan syndrome as well as acute myeloid leukemia. [provided by RefSeq, Aug 2016]

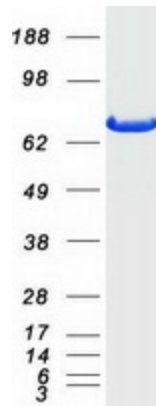
Product images:



Circular map for RC220029



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY PTPN11 (Cat# RC220029, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-PTPN11(Cat# [TA501914]).



Coomassie blue staining of purified PTPN11 protein (Cat# [TP320029]). The protein was produced from HEK293T cells transfected with PTPN11 cDNA clone (Cat# RC220029) using MegaTran 2.0 (Cat# [TT210002]).