

## Product datasheet for **SC110989**

### PTP1B (PTPN1) (NM\_002827) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	PTP1B (PTPN1) (NM_002827) Human Untagged Clone
Tag:	Tag Free
Symbol:	PTP1B
Synonyms:	PTP1B
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC110989 sequence for NM_002827 edited (data generated by NextGen Sequencing)

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ATGGAGATGGAAAAGGAGTTCGAGCAGATCGACAAGTCCGGGAGCTGGGCGCCATTTAC
CAGGATATCCGACATGAAGCCAGTGAAGTCCCATGTAGAGTGGCCAAGCTTCTAAGAAC
AAAAACCGAAATAGGTACAGAGACGTCAGTCCCTTTGACCATAGTCGGATTAAACTACAT
CAAGAAGATAATGACTATATCAACGCTAGTTTGATAAAAAATGGAAGAAGCCAAAGGAGT
TACATTCTTACCCAGGGCCCTTTGCCTAACACATGCGGTCACTTTTGGGAGATGGTGTGG
GAGCAGAAAAGCAGGGGTGTCGTCATGCTCAACAGAGTATGGAGAAAGTTTCGTAAAA
TGCGCACAACTAGGCCACAAAAAGAAGAAAAAGAGATGATCTTTGAAGACACAAATTTG
AAATTAACATTGATCTCTGAAGATATCAAGTCATATTATACAGTGCACAGCTAGAATTG
GAAAACCTTACAACCCAAGAACTCGAGAGATCTTACATTTCCACTATACCACATGGCCT
GACTTTGGAGTCCCTGAATCACCAGCCTCATTCTTGAACCTTTCTTTCAAAGTCCGAGAG
TCAGGGTCACTCAGCCCGGAGCACGGGCCCGTTGTGGTGAAGTGCAGTGCAGGCATCGGC
AGGTCTGGAACCTTCTGTCTGGCTGATACCTGCCTCTTGCTGATGGACAAGAGGAAAGAC
CCTTCTCCGTTGATATCAAGAAAGTGTGTTAGAAATGAGGAAGTTTCGGATGGGGCTG
ATCCAGACAGCCGACCAGCTGCGCTTCTCCTACCTGGCTGTGATCGAAGGTGCCAAATTC
ATCATGGGGGACTCTTCCGTGCAGGATCAGTGAAGGAGCTTTCCACAGGACCTGGAG
CCCCACCCGAGCATATCCCCACCTCCCCGGCCACCCAAACGAATCCTGGAGCCACAC
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GATAAAGACTGCCCATCAAGGAAGAAAAAGGAAGCCCTTAAATGCCGCACCCTACGGC
ATCGAAAGCATGAGTCAAGACACTGAAAGTTAGAAGTCGGGTGCTGGGGGGAAGTCTTCGA
GGTGCCAGGCTGCCTCCCCAGCCAAAGGGGAGCCGTCAGTCCCGAGAAGGACGAGGAC
CATGCACTGAGTTACTGGAAGCCCTTCTGGTCAACATGTGCGTGGCTACGGTCTCACG
GCCGGCCTTACCTCTGCTACAGGTTCTGTTCAACAGCAACACATAG

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Clone variation with respect to NM\_002827.2



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<b>5' Read Nucleotide Sequence:</b>	<p>&gt;OriGene 5' read for NM_002827 unedited  AGGGCGGCCGCGAATTCGGCACGAGGGCGGCTAGGGCGGCGGTAGCTGCAGGGTTCGGGG  ATTGCAGCGGGCCTCGGGGCTAAGAGCGCGACGCGGCCTATAGCGGCAGACGGCGCAGTG  GGCCGAGAAGGAGGCGCAGCAGCCGCCCTGGCCCGTATGGAGATGGAAGGAGTTCGA  GCAGATCGACAAGTCCGGGAGCTGGGCGCCATTTACCAGGATATCCGACATGAAGCCAG  TGACTTCCCATGTAGAGTGGCCAAGCTTCTAAGAACAAAAACCGAAATAGGTACAGAGA  CGTCAGTCCCTTTGACCATAGTCGGATTAACACTACATCAAGAAGATAATGACTATATCAA  CGCTAGTTTTGATAAAAAATGGAAGAAGCCAAAGGAGTTACATTCTTACCCAGGGCCCTTT  GCCTAACACATGCGGTCACTTTTGGGAGATGNGTGTGGGAGCAGAAAGCANGGGGTGTCG  TCATGCTCAACAGAGTGATGGAGAANAGGGTTCGTTAAAAATGCGCACAATACTGGCCACA  AAAAGAAGAAAAGAGATGATCTTTGAAGACACAAATTTGAAATTAACATTGATCTCTGGA  GATATCAAGTCATATTATACAGTGCACAGCTAGAATTGGAAAACCTTTACACCCAAAGAA  CTCGAGAGATCTTACATTTCACTATACCACATGGCCTGCTTTTTGGAGTCCCTGAATACC  AGCCTCATTCTTGAACCTTCTTTTACAAGTCCGAGAGTCAGGGTCACTCANCCCCGACCC  GGCCCCCTTNGTGGTGCCTGNAATGCAAGCCTTCGGAAGGGCTGGGACCTTTTGGCT  GGGCGGATCCCTGCCTTTTGGTGAAGGACAAAAAGGAAGACCCTCTTTCCGTGAATTA  AAAAAGGGCTGGTAAAAAAGGGAGAATTCGCGATGGGGGCC</p>
<b>3' Read Nucleotide Sequence:</b>	<p>&gt;OriGene 3' read for NM_002827 unedited  AGCTATGGACCGGCGCCGAATCTAGGATCGAGTTTTTTTTTTTTTTTTTTAGAAAAA  ATTTTATTGTTGCAGCTAAAATGCAAACCCATCATGAATATGGCAAGTTGGAAAAGTGA  CAGTCTGACAGTTCTGTGAGGTCACAGAAGACCCTGAGACACTCCCCCCCACCCACCCGG  TCATGCAGCCACGTATCCACACACACCTGAAAAGGTATTATACCAAACACCTTGCTTTT  TTTGTTTTTATTTTTGAAAAATGGTTTATTCCATGGCCATTGAAAAAATAATGACCTG  ATGAGTAAATATTGGCTAAGGCATATAGCAGAGCAGCTCGCTACCTCTAACATAATG  TGTAACAAGGTGGAGAGCCAGCTGCTCTCCAAGGATAGGAGGTTAAACCAGTACGTCAT  TTTGAAATGCTACTATATATACACCCAAACTACTACATACATATACAGGACTTAAAAA  CAACAAGCCCAGCTCAGAATGCTTACAGCCTGGCACCTAAGCCTTATCCACACCTCACCA  TAGCTCTGCAGGGTGACACCTCGAATGTTCCCACCACAGAATTTCTGTACTGGCTTCT  ACCACGAGAAAAGGCAAAATGTGAAAATGCTGGCAAGAGAGTAGCTCGGGAGCTACAGTG  CCGTGTTTTTTCATGTTAAAAAGCCACTTAATGTGGAGGTTCTCAGTTCCCTTTGCAGGAA  GAGTCGTGAGCACCATCAGGCCCCACAGGTTTTGAGGGTGGGGCAGACCGCCTCTCTCG  GNCAGGTGACCGGGACAGAGACGGCGGAGGCTGCCTAAAGGACCGTCACCCAGNCTGTT  TCAAGAAGTGTGNTTCCAGCAGGTGCCCTCTCTTCCAATCACGGTCTGCTCAAGAGAAG  GTTGACTTGGAATGGCGGAGGCTGATCCACAAGTTGGGGCGGGGGGTGTCCTGCTTCC  TAAATATGTCCAGACGGA</p>
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_002827
<b>Insert Size:</b>	3520 bp
<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<b>Components:</b>	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\\_002827.2](#), [NP\\_002818.1](#)

**RefSeq Size:** 3318 bp

**RefSeq ORF:** 1308 bp

**Locus ID:** 5770

**UniProt ID:** [P18031](#)

**Cytogenetics:** 20q13.13

**Domains:** Y\_phosphatase, PTPc\_motif

**Protein Families:** Druggable Genome, Phosphatase, Transmembrane

**Protein Pathways:** Adherens junction, Insulin signaling pathway

**Gene Summary:** The protein encoded by this gene is the founding member of the protein tyrosine phosphatase (PTP) family, which was isolated and identified based on its enzymatic activity and amino acid sequence. PTPs catalyze the hydrolysis of the phosphate monoesters specifically on tyrosine residues. Members of the PTP family share a highly conserved catalytic motif, which is essential for the catalytic activity. 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 has been shown to act as a negative regulator of insulin signaling by dephosphorylating the phosphotyrosine residues of insulin receptor kinase. This PTP was also reported to dephosphorylate epidermal growth factor receptor kinase, as well as JAK2 and TYK2 kinases, which implicated the role of this PTP in cell growth control, and cell response to interferon stimulation. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2013]  
Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (1).