

## **Product datasheet for RG204902**

## PTP1B (PTPN1) (NM 002827) Human Tagged ORF Clone

## **Product data:**

**Product Type:** Expression Plasmids

Product Name: PTP1B (PTPN1) (NM\_002827) Human Tagged ORF Clone

Tag: TurboGFP

Symbol: PTP1B

Synonyms: PTP1B

Mammalian Cell Neomycin

Selection:

**Vector:** pCMV6-AC-GFP (PS100010)

E. coli Selection: Ampicillin (100 ug/mL)

ORF Nucleotide >RG204902 representing NM\_002827

Sequence: Red=Cloning site Blue=ORF Green=Tags(s)

 ${\tt TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC}$ 

GCCGCGATCGCC

ATGGAGATGGAAAAGGAGTTCGAGCAGATCGACAAGTCCGGGAGCTGGGCCGCCATTTACCAGGATATCC GACATGAAGCCAGTGACTTCCCATGTAGAGTGGCCAAGCTTCCTAAGAACAAAAACCGAAATAGGTACAG AGACGTCAGTCCCTTTGACCATAGTCGGATTAAACTACATCAAGAAGATAATGACTATATCAACGCTAGT TTGATAAAAATGGAAGAAGCCCAAAGGAGTTACATTCTTACCCAGGGCCCTTTGCCTAACACATGCGGTC ACTTTTGGGAGATGGTGTGGGAGCAGAAAAGCAGGGGTGTCGTCATGCTCAACAGAGTGATGGAGAAAGG TTCGTTAAAATGCGCACAATACTGGCCACAAAAAGAAGAAAAAGAGATGATCTTTGAAGACACAAATTTG AAATTAACATTGATCTCTGAAGATATCAAGTCATATTATACAGTGCGACAGCTAGAATTGGAAAACCTTA CAACCCAAGAAACTCGAGAGATCTTACATTTCCACTATACCACATGGCCTGACTTTGGAGTCCCTGAATC ACCAGCCTCATTCTTGAACTTTCTTTTCAAAGTCCGAGAGTCAGGGTCACTCAGCCCGGAGCACGGGCCC TGATGGACAAGAGGAAAGACCCTTCTTCCGTTGATATCAAGAAAGTGCTGTTAGAAATGAGGAAGTTTCG GATGGGGCTGATCCAGACAGCCGACCAGCTGCGCTTCTCCTACCTGGCTGTGATCGAAGGTGCCAAATTC ATCATGGGGGACTCTTCCGTGCAGGATCAGTGGAAGGAGCTTTCCCACGAGGACCTGGAGCCCCCACCCG AGCATATCCCCCCACCTCCCCGGCCACCCAAACGAATCCTGGAGCCACACAATGGGAAATGCAGGGAGTT CTTCCCAAATCACCAGTGGGTGAAGGAAGAGACCCAGGAGGATAAAGACTGCCCCATCAAGGAAGAAAAA GGAAGCCCCTTAAATGCCGCACCCTACGGCATCGAAAGCATGAGTCAAGACACTGAAGTTAGAAGTCGGG TCGTGGGGGGAAGTCTTCGAGGTGCCCAGGCTGCCTCCCCAGCCAAAGGGGAGCCGTCACTGCCCGAGAA GGACGAGGACCATGCACTGAGTTACTGGAAGCCCTTCCTGGTCAACATGTGCGTGGCTACGGTCCTCACG GCCGGCGCTTACCTCTGCTACAGGTTCCTGTTCAACAGCAACACA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG204902 representing NM\_002827

Red=Cloning site Green=Tags(s)

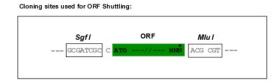
MEMEKEFEQIDKSGSWAAIYQDIRHEASDFPCRVAKLPKNKNRNRYRDVSPFDHSRIKLHQEDNDYINAS LIKMEEAQRSYILTQGPLPNTCGHFWEMVWEQKSRGVVMLNRVMEKGSLKCAQYWPQKEEKEMIFEDTNL KLTLISEDIKSYYTVRQLELENLTTQETREILHFHYTTWPDFGVPESPASFLNFLFKVRESGSLSPEHGP VVVHCSAGIGRSGTFCLADTCLLLMDKRKDPSSVDIKKVLLEMRKFRMGLIQTADQLRFSYLAVIEGAKF IMGDSSVQDQWKELSHEDLEPPPEHIPPPPRPKRILEPHNGKCREFFPNHQWVKEETQEDKDCPIKEEK GSPLNAAPYGIESMSQDTEVRSRVVGGSLRGAQAASPAKGEPSLPEKDEDHALSYWKPFLVNMCVATVLT AGAYLCYRFLFNSNT

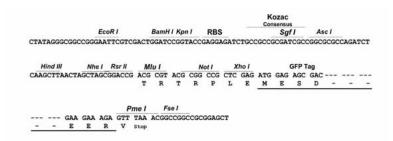
TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-Mlul

**Cloning Scheme:** 





**ACCN:** NM\_002827

ORF Size: 1305 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.

**RefSeg:** NM 002827.4

 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

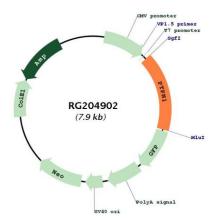
and amino acid sequence. PTPs catalyze the hydrolysis of the phosphate monoesters

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 phosphotryosine 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]



## **Product images:**



Circular map for RG204902