

## Product datasheet for **RG237724**

### **PTP1B (PTPN1) (NM\_001278618) Human Tagged ORF Clone**

#### Product data:

Product Type:	Expression Plasmids
Product Name:	PTP1B (PTPN1) (NM_001278618) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	PTP1B
Synonyms:	PTP1B
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG237724 representing NM_001278618. Blue=ORF Red=Cloning site Green=Tag(s)

```
GCTCGTTTGTAGTAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGGAAGAAGCCCAAAGGAGTTACATTCTTACCCAGGGCCCTTTGCCAAACATGCGGTCACCTTTGG
GAGATGGTGTGGGAGCAGAAAAGCAGGGGTGTCGTCAACAGAGTGATGGAGAAAGGTTTCGTTA
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ACATTGATCTCTGAAGATATCAAGTCATATTATACAGTGCACAGCTAGAATTGGAAAACCTTACAACC
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GAGCATATCCCCCACCTCCCGGCCACCCAAACGAATCCTGGAGCCACACAATGGGAAATGCAGGGAG
TTCTTCCCAAATCACCAGTGGGTGAAGGAAGAGACCCAGGAGGATAAAGACTGCCCATCAAGGAAGAA
AAAGGAAGCCCTTAAATGCCGACCCCTACGGCATCGAAAGCATGAGTCAAGACTGAAGTTAGAAGT
CGGGTCGTGGGGGAAGTCTTCGAGGTGCCAGGCTGCCTCCCGCCAAAGGGGAGCCGTCAGTGCC
GAGAAGGACGAGGACCATGCACTGAGTTACTGGAAGCCCTTCTGGTCAACATGTGCGTGGCTACGGTC
CTCACGGCCGGCCTTACCTCTGTACAGTTCCTGTTCAACAGCAACACA
ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAAAC
```



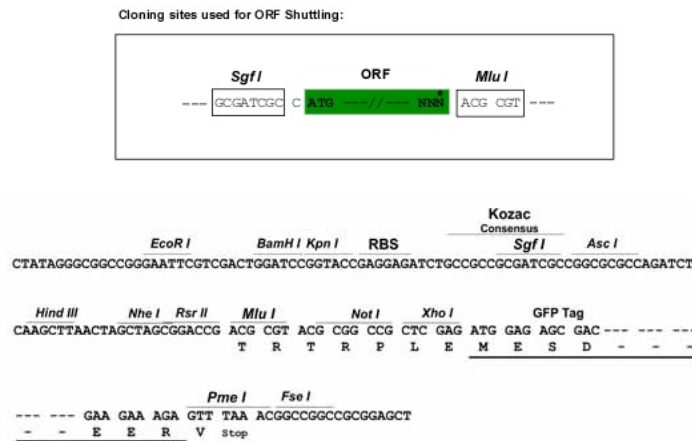
[View online »](#)

**Protein Sequence:** >Peptide sequence encoded by RG237724  
 Blue=ORF Red=Cloning site Green=Tag(s)

MEEAQRSYILTQGPLPNTCGHFWEMVWEQKSRGVVMLNRMVEKGSCLKCAQYWPQKEEKEMIFEDTNLKL  
 TLISEDIKSYTYRQLELENLTTQETREILHFHYTTWPDFGVPEPASFLNFKVRESGSLSPEHGPV  
 VVHCSAGIGRSGTFCLADTCLLLMDKRKDPSSVDIKKVLLEMRKFRMGLIQTADQLRFSYLAVIEGAKF  
 IMGDSSVQDQWKLSHEDLEPPPEHI PPPRPPKRILEPHNGKCREFFPNHQWVKEETQEDKDCPIKEE  
 KGSPLNAAPIYGIEMSQDTEVRSRVVGGSLRGAQAASPAKGEPSLPEKDEDHALS YWKPFLVNMCVATV  
 LTAGAYLCYRFLFNSNT  
**TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGEGTPEQGRMTNKMSTKGALTFSPYLLSHV**  
 MGYGFYHFGTYPYSGYENPFLHAINNGGYNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPED  
 SVIFTDKIIRSNATVEHLHPMGDNDLDGSFTRTFSLRDGGYSSVVD SHMHFKSAIHPSILQNGGPMFA  
 FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001278618

**ORF Size:** 1086 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).

**RefSeq:** [NM\\_001278618.1](#), [NP\\_001265547.1](#)

**RefSeq Size:** 3482 bp

RefSeq ORF: 1089 bp

Locus ID: 5770

UniProt ID: [P18031](#)

Cytogenetics: 20q13.13

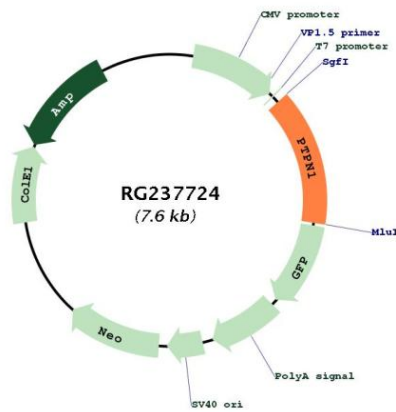
Protein Families: Druggable Genome, Phosphatase, Transmembrane

Protein Pathways: Adherens junction, Insulin signaling pathway

MW: 41.7 kDa

**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]

**Product images:**



Circular map for RG237724