

## Product datasheet for **RG214228**

### PTPRB (NM\_002837) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	PTPRB (NM_002837) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	PTPRB
Synonyms:	HPTP-BETA; HPTPB; PTPB; R-PTP-BETA; VEPTP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG214228 representing NM_002837 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCTGAGCCATGGAGCCGGTTGGCCTTGTGGATCACACTGAGCCTGCTGCAGACTGGACTGGCGGAGC  
CAGAGAGATGTAACCTCACCTGGCGGAGTCCAAGGCCTCCAGCCATTCTGTGTCTATCCAGTGGAGAAT  
TTTGGGCTCACCTGTAACCTTAGCCTCATCTATAGCAGTGACACCCTGGGGCCCGGTTGTGCCCTACC  
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GTAGCAGAATGGGAGAAATACATCATTTCCCTAGCTGACAGAGACCTCTTACTGATCCACAAGTCACTCT  
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 TGAATCCAGAGTATCACAGAGATCCAGTCTATTCAAGGCAT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG214228 representing NM\_002837  
 Red=Cloning site Green=Tags(s)

MLSHGAGLALWITL SLLQTGLAEPERCNFTLAESKASSHSVSIQWRILGSPCNFLIYSSDTLGAALCPT  
 FRIDNTTYGCNLQDLQAGTIYNFR IISLDEERTVVLQTDPLPPARFGVSKEKTTSTSLHVVWTPSSGKVT  
 SYEVQLFDENNQI QGVQIQESTSWNEYTFNLTAGSKYNIAITAVSGGKRFSVYTNGSTVPSPVKDIG  
 ISTKANSL IISWSHSGSNVERYRLMLMDKGILVHGGVVDKHATS YAFHGLTPGYLYNLVTMTEAAGLQNY  
 RWKLVRTAPMEVSNLKV TNDGSLTSLKVKWQRP PGNVDSYNITL SHKGTIKESRVLAPWITETHFKELVP  
 GRLYQVTVSCVSGELSAQKMAVGRTFPDKVANLEANNGRM RSLVVSWSPPAGDWEQYRILLFND SVVLL  
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 PSPPSLMSFADIANTSLAITWKPPDWTDYNDFELQWLPRDALTVFNPNYNNRKSEGRIVYGLRPGRSYQF  
 NVKTVSGDSWKTYSKPIFGSVRTPDKIQNLHCRPQNSTAIACSWIPDSDFDGYSIECRKMDTQEV EFS  
 RKLEKEKSLNIMMLVPHKRYLVS IKVQSAGMTSEVVEDSTITMIDRPPPPPHIRVNEKDVLSKSSIN  
 FTVNCSWFSDTNGAVKYFTVVVREADGSDELKPEQQHPLPSYLEYRHNASIRVYQTYNFASKCAENPNSN  
 SKSFNIKLGAE MESLGGKCDPTQKQFCDGPLKPHATAYRISIRAF TQLFDEDLKEFTKPLYSDTFFSLPIT  
 TESEPLFGAIEGVSAGLFLIGMLVAVVALLICRQKVSHGRERPSARLSIRRDRPLSVHNLGQKGNR KTS  
 CPIKINQFEGHFMKLQADS NYLLSKEYEELKDVGRNQSCDIALLPENRGKNRYNNILPYDATRVKLSNVD  
 DDPCCSDYINASYIPGNFRREYIVTQGPLPGTKDDFWKMVWEQNVHNI VMVTQCVEKGRVKCDHYW PADQ  
 DSLYYGDLILQMLSESVLPEWTIREFKICGEEQLDAHRLIRHFHYTVWPDHGVPE T TQSLIQFVRTVRDY  
 INRSPGAPT VVHCSAGVGRGTGFIALDRILQLLDSKDSVDIYGAVHDLRLHRVHMVQTECQYVYLHQCV  
 RDVLRARKLRSEQENPLFPIYENVNPEYHRDPVYSRH

TRTRPLE - GFP Tag - V

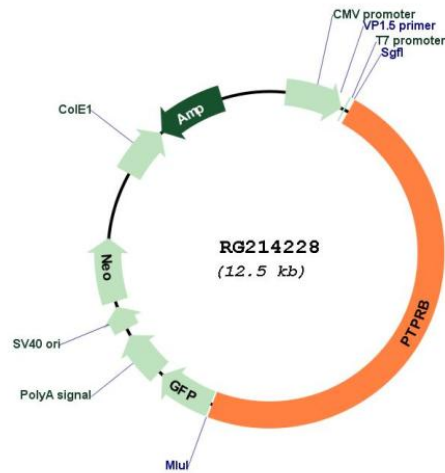
**Restriction Sites:**

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM\_002837

ORF Size: 5991 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.

<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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u><a href="#">NM_002837.4</a></u> , <u><a href="#">NP_002828.3</a></u>
<b>RefSeq Size:</b>	10663 bp
<b>RefSeq ORF:</b>	5994 bp
<b>Locus ID:</b>	5787
<b>UniProt ID:</b>	<u><a href="#">P23467</a></u>
<b>Cytogenetics:</b>	12q15
<b>Protein Families:</b>	Druggable Genome, Phosphatase
<b>Protein Pathways:</b>	Adherens junction
<b>Gene Summary:</b>	<p>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 an extracellular domain, a single transmembrane segment and one intracytoplasmic catalytic domain, thus belongs to receptor type PTP. The extracellular region of this PTP is composed of multiple fibronectin type_III repeats, which was shown to interact with neuronal receptor and cell adhesion molecules, such as contactin and tenascin C. This protein was also found to interact with sodium channels, and thus may regulate sodium channels by altering tyrosine phosphorylation status. The functions of the interaction partners of this protein implicate the roles of this PTP in cell adhesion, neurite growth, and neuronal differentiation. Alternate transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, May 2011]</p>