

## Product datasheet for **RC204902L4V**

### PTP1B (PTPN1) (NM\_002827) Human Tagged ORF Clone Lentiviral Particle

#### Product data:

Product Type:	Lentiviral Particles
Product Name:	PTP1B (PTPN1) (NM_002827) Human Tagged ORF Clone Lentiviral Particle
Symbol:	PTP1B
Synonyms:	PTP1B
Mammalian Cell Selection:	Puromycin
Vector:	pLenti-C-mGFP-P2A-Puro (PS100093)
Tag:	mGFP
ACCN:	NM_002827
ORF Size:	1305 bp
ORF Nucleotide Sequence:	The ORF insert of this clone is exactly the same as(RC204902).
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. <a href="#">More info</a>
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
RefSeq:	<a href="#">NM_002827.2</a>
RefSeq Size:	3573 bp
RefSeq ORF:	1308 bp
Locus ID:	5770
UniProt ID:	<a href="#">P18031</a>
Cytogenetics:	20q13.13
Domains:	Y_phosphatase, PTPc_motif
Protein Families:	Druggable Genome, Phosphatase, Transmembrane



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

**MW:** 50 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]