

## Product datasheet for **MG215745**

### **Ptprn2 (NM\_011215) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Ptprn2 (NM_011215) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Ptprn2
Synonyms:	4930425H11Rik; IA2beta; mKIAA0387; phogrin; Phol; PTP-NP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>MG215745 representing NM\_011215  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGGGCCCGCTCCCGCTTTTGTGCTGCTGCTGCTACCGCCCGCTGCCTCGCGCTCTGCCCGCC  
 CCGCGTCTGCCCGCGCCGGCAGCTCCCGGGCGCCTGGGATGCTTGTGGAGGATGGCTTGTGTGGATC  
 ACTGGAGACCTGTGTGAACGATGGTGTGTTTGAAGATGTCAAAAGGTTCCGGTATGGACACTACCGA  
 TATGAGGTACCACCAGGAGCCCTGCTGCACCTGAAGGTACCTTACAGAAGCTCTCCCGTACAGGTTTCA  
 CGTGGCAAGATGACTATACCCAGCGTGTGATCGCCAGGAGCTTGCAAACCTCCCAAGGCCACCTATG  
 GCATGGGAAACGTCCGGCCACCCAGGTCCTTACAACAGAATGCTGACAATGAAAAATGGTTCAGTCTG  
 GAGAGGGAGGTGGCCCTGGCCAAGACCCCTCGGCGCTATCTGCCCTACCTGGAGCTTCTGTCCAGACCC  
 CAACAGCAAATGCACACTCTAGGATAGACCATGAGACTCGTCCAGCCAAGGTGAAGACTCTCCCTGA  
 GAACATCTGACCTACGTGGCCACACATCAGCACTGACCTATCCTCCTGCAACCCGGGCCAAGTATCCT  
 GATAACCTTCTGCGGCCCTTTAGCCGGCTCCAGCCAGATGAGCTAGCCCAAGGTAGACGGTACATAG  
 ACAAACAGAAACTGATTGCAGCACTGGGCGCTACACTGCTCAGAGGCTTCTGGAGAAAATGACCCAGA  
 GCCACGGTACCTTGTACATGGTTCCTCGAGAGCACCAAGGCCATTCTCAGCAACTGCTTTGTCTCAGAGA  
 TGGCCTCCACCTCCTGGAGACGCCAAAGACTCCCCGAGTATGGATGATGACACACTCCTGCAGAGTCTC  
 TGAAGGATTTGCAGCAGAACTCTGAAGTGGACCGCTGGGCCCTGAAGGAGGAAAGCAGACTCAGT  
 TGCTGGAGCCATACAAAGTATCCTGCAGAGGGAAGCCAAAGAAAGCCACGGGAGAGGGGCTGAAGGACAG  
 CCAAGAGAGCAGACAGATGCCCCAGAGACAATGCTTCAAGATCACAGACTATCAGAGGTGGATGACCCAG  
 TGTACAAGGAGGTCAACCGTCTGAGCTTCCAGCTTGGGACCTTGAAGGACTATGGTCTCCTCTCTT  
 ACCTGAAGGTCCCCTTCTAGAAAAATCCTCAGAGAAGAGATTAAGAAAGTCAAGCAGCCAGAGGAGGTC  
 TTGTCTTCAGAAGAGGAGACTGCTGGGGTGGAGCATGTGAGGAGCCGACTTACTCCAAAGACCTATTTG  
 AAAGGAAACCAAACCTCAGAGCCCGACCCAGGAGGCTTGAAGTACAGTTCAAAACCGAGCTCCAGAGTT  
 GTGGGAGGATGAAGAAAGCCTCAAATGGCAGCACAGGGACCCCTAGTGGAGGCCTACAGCTGGAAGTG  
 CAGCCTTCTGAGGAACAGCAGGGATACATCCTCACAGGAAACAACCTCTAAGTCCAGAGAAGGGGAAGC  
 AGCTGATGGACCAAGTTGCCACATCCTCCGGTACCTTCCAGCTTCTTGCAGATATCAAAGTTTGGG  
 ACCAGCAGTGACCTTCAAAGTAAAGTCCAAACATCCAAAACATGACAACCTGCCGATGTCATCAAGGCTGCA  
 GCTGACAACAAAGACCAGCTGGAGAAGGCAACTGGACTGACAATCCTTCAAAGTGAATCAGGCCGAAGG  
 GAAAGCTCAAACCTCCTGCCGCATCAGGAAGAGCAAGAGGACTCTACCAAGTTCATTTTGCTCACCTTCT  
 CTCCATTGCCTGCATCCTGGGGTTCTCCTGGCTTCCAGCCTTGCTACTGCCTCCGCCACAACCTCACAC  
 TACAAGCTGAAGGACAAGTTGTCTGGACTAGGCGCTGACCCAGTGCAGATGCCACTGAAGCCTACCAGG  
 AGCTATGCCGCCAGCGTATGGCTGTTCTGCACAGGACCCTCTGAGGGACCACATACATCACGCATCAA  
 CAGCGTCTCATCCAGTTCAGCGATGGCCGATGCCTAGTCTTCCGGCTCGGAGCAGCACTTATCCTGG  
 TCTGAGGAGCCTGTCCAGTCCAACATGGACATCTACTGGCCACATGATCCTGGCCTACATGGAAGACC  
 ATCTGAAGAACAAGAACCCTGGAGAAGGAGTGGGAAGCACTGTGCCCTACCAAGCAGAGCCCAACAG  
 CTCACTTGTGGCCAGAGAGAGGAGAATGCACCCAAGAACCCTTCCCTGGCTGTGCTGACCTATGACCCAC  
 TCCAGGATCCTGTTGAAGTCTCAAACAGCCATGGCAGTTCGACTACATCAATGCCAGCCCATTTATGG  
 ACCATGACCCACGAAACCCGCATACATTGCCACCCAAGGCCACTTCCCGCCACGGTGGCCGACTTCTG  
 GCAGATGGTGTGGAAAGCGCTGTGCAGTCAATTGTGATGCTGACACCCCTCTCCGAGAACGGCGTCCGG  
 CAGTGCCATCACTACTGGCCGATGAAGGCTCCAACCTTACCATGTCTACGAGGTCAATCTAGTCTCTG  
 AGCACATATGGTGCCAGGATTTCTGGTGAAGCTTTTACCTGAAGAACCTGCAGACCAACGAGACTCG  
 CACGGTGACCCAGTTCACCTTCTGAGTTGGTATGACCAGGGAGTCCCTTCTCCACGAGGTCACTCCTG  
 GATTTCCGCAGAAAAGTGAACAAATGCTACCGAGGCCGCTTGTGCGATCATTGTCATTGCAGTGACG  
 GCGCCGGCAGGAGTGAAACCTACGTCCTGATTGACATGGTCTCAATAAGATGGCCAAAGGTGCTAAAGA  
 GATTGATATCGCAGCGACCCTGGAGCACTTGGAGGACCAGAGACCAGGCATGGTCCAGACAAGGAGCAG  
 TTTGAGTTGCGCTGACAGCTGTGGCTGAGGAGGTGAATGCCATCCTGAAGGCCCTTCCCCAG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG215745 representing NM\_011215  
 Red=Cloning site Green=Tags(s)

MGPPLPLLLLLLLLLPPPLPRALPAPASARGRQLPGRLGCLFEDGLCGSLETCVNDGVFGRCQKVPVMDTYR  
 YEVPFGALLHLKVTLQKLSRTGFTWQDDYTQRVIAQELANLPKAYLWHGETSGPPRSLQQNADNEKWFSL  
 EREVALAKTLRRYLPYLELLSQPTANAHSRIDHETRPAGGEDSSPENILTYVAHTSALTYPPATRAKYP  
 DNLLRPF SRLQPELSPKVDGDIKQKLAALGAYTAQRLPGENDPEPRYL VHGSSRAPRPF SATALSQR  
 WPPPPGDAKDSPMDDDTLLQSLKDLQQNSEVDRLGPLKEEKADSVAGAIQSDPAEGSQESHGRGAEQ  
 PREQTDAPETMLQDHRLEVDVPYKEVNRLSFQLGDLLKDYGSPLLPEGPLLEKSSREEIKKSEQPEEV  
 LSSEEETAGVEHVRSTYSKDLFERKPNSEPPRRLEDQFQNRAPELWEDEESLKLAAQPPSGGLQLEV  
 QPSEEQQGYILTGNNPLSPEKKGQLMDQVAHILRVPSSFFADIKVLGPAVTFKVSANIQNMTTADVIKAA  
 ADNKDQLEKATGLTILQSGIRPKGKLLKLLPHQEEQEDSTKFILLTFLSIACILGVLLASSLAYCLRHNH  
 YLKDKL SGLGADPSADATEAYQELCRQRMVVRPQRSEGPHTSRINSVSSQFSDGPMPPSPARSSTSSW  
 SEEPVQSNMIDISTGHMILAYMEDHLKKNRLEKEWEALCAYQAEPNSSLVAQREENAPKNRSLAVLTYDH  
 SRILLKSNHSHGSDYINASPIMDHDPRNPAYIATQGPLPATVADFQWQMVWESGCAVIVMLTPLSENGVR  
 QCHHYWPDEGSNLYHYEVNLVSEHIWCQDFLVRFSYLKLNLTNETRTVTQFHFLSWYDQGVPSSTRSL  
 DFRRKVNKCYRGRSCPIIVHCSDGAGRSGTYVLIDMVLNMAKGAKEIDIAATLEHLRDQRPQGMVQTKEQ  
 FEFALTAVAEVNAILKALPQ

TRTRPLE - GFP Tag - V

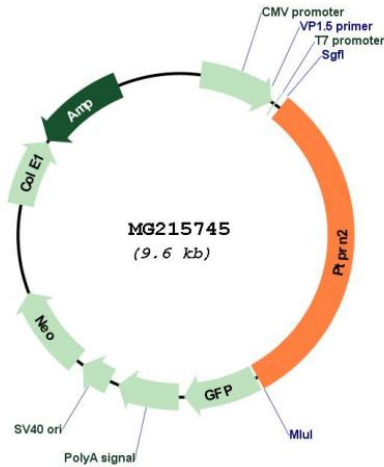
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM\_011215

ORF Size: 3003 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.

RefSeq: [NM\\_011215.2](#), [NP\\_035345.2](#)

RefSeq Size: 4688 bp

RefSeq ORF: 3006 bp

Locus ID: 19276

UniProt ID: [P80560](#)

Cytogenetics: 12 62.65 cM

**Gene Summary:**

Plays a role in vesicle-mediated secretory processes (PubMed:21732083). Required for normal accumulation of secretory vesicles in hippocampus, pituitary and pancreatic islets. Required for the accumulation of normal levels of insulin-containing vesicles and preventing their degradation (PubMed:21732083). Plays a role in insulin secretion in response to glucose stimuli (PubMed:15220191, PubMed:16418280, PubMed:21732083). Required for normal accumulation of the neurotransmitters norepinephrine, dopamine and serotonin in the brain. In females, but not in males, required for normal accumulation and secretion of pituitary hormones, such as luteinizing hormone (LH) and follicle-stimulating hormone (FSH) (PubMed:16269463). Required to maintain normal levels of renin expression and renin release (PubMed:19019914). May regulate catalytic active protein-tyrosine phosphatases such as PTPRA through dimerization (PubMed:12364328). Has phosphatidylinositol phosphatase activity; the PIPase activity is involved in its ability to regulate insulin secretion. Can dephosphorylate phosphatidylinositol 4,5-biphosphate (PI(4,5)P2), phosphatidylinositol 5-phosphate and phosphatidylinositol 3-phosphate (By similarity). Regulates PI(4,5)P2 level in the plasma membrane and localization of cofilin at the plasma membrane and thus is indirectly involved in regulation of actin dynamics related to cell migration and metastasis; upon hydrolyzation of PI(4,5)P2 cofilin is released from the plasma membrane and acts in the cytoplasm in severing F-actin filaments (By similarity).[UniProtKB/Swiss-Prot Function]