

## Product datasheet for MR215745

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

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Ptprn2 (NM_011215) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Ptprn2
Synonyms:	4930425H11Rik; IA2beta; mKIAA0387; phogrin; Phol; PTP-NP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR215745 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGGGCCCGCTCCCGCTTTTGCTGCTGCTGCTACCGCCCGCTGCCTCGCGCTCTGCCGCC  
CCGCGTCTGCCCGCGCCGCGAGCTCCCGGGCGCCTGGGATGCTTGTGGAGGATGGCTGTGGATC  
ACTGGAGACCTGTGTGAACGATGGTGTGTTGGAAGATGTCAAAGGTTCCGGTATGGACACTTACCGA  
TATGAGGTACCACAGGAGCCCTGCTGCACCTGAAGGTCACCTACAGAAGCTCTCCCGTACAGGTTCA  
CGTGGCAAGATGACTATACCCAGCGTGTGATCGCCAGGAGCTTGCAAACCTCCCAAGGCTACCTATG  
GCATGGGGAAACGTCGGGCCACCCAGGTCCTTACAACAGAATGCTGACAATGAAAAATGGTTCACTCTG  
GAGAGGGAGGTGGCCCTGGCCAAGACCCTTCGGCGCTATCTGCCCTACCTGGAGCTTCTGTCCCAGACCC  
CAACAGCAAATGCACACTCTAGGATAGACCATGAGACTCGTCCAGCCAAGGGTGAAGACTTTCCTCTGA  
GAACATCTGACCTACGTGGCCACACATCAGCACTGACCTATCCTCCTGCAACCCGGGCCAAGTATCCT  
GATAACCTTCTGCGGCCCTTAGCCGGCTCCAGCCAGATGAGCTCAGCCCCAAGGTAGACGGTGACATAG  
ACAAACAGAACTGATTGCAGCACTGGGCGCCTACTGCTCAGAGGCTTCTGGAGAAAATGACCCAGA  
GCCACGGTACCTTGTACATGGTTCTCGAGAGCACCAAGGCCATTCTCAGCAACTGCTTTGTCTCAGAGA  
TGGCCTCCACCTCCTGGAGACGCCAAAGACTCCCGAGTATGGATGACACACTCCTGCAGAGTCTCC  
TGAAGGATTTGCAGCAGAACTCTGAAGTGGACCGCTGGGCCCTGAAGGAGGAGAAAGCAGACTCAGT  
TGCTGGAGCCATACAAAGTGATCCTGCAGAGGGAAGCCAAAGAAAGCCACGGGAGAGGGGTGAAGGACAG  
CCAAGAGAGCAGACAGATGCCCCAGAGACAATGCTTCAAGATCACAGACTATCAGAGGTGGATGACCCAG  
TGTACAAGGAGGTCAACCGTCTGAGCTTCCAGCTTGGGGACCTTGAAGGACTATGGGTCTCCTCTCTT  
ACCTGAAGGTCCCCTTCTAGAAAAATCCTCCAGAGAAGAGATTAAGAAGTCAGAGCAGCCAGAGGAGGTC  
TTGTCTTCAAGAGGAGACTGCTGGGGTGGAGCATGTGAGGAGCCGACTTACTCAAAGACCTATTTG  
AAAGGAAACCAACTCAGAGCCCAGCCAGGAGGCTTGAGGATCAGTTCAAACCCAGCTCCAGAGTT  
GTGGGAGGATGAAGAAAGCCTCAAATTGGCAGCACAGGGACCCCTAGTGAGGCTACAGCTGGAAGT



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CAGCCTTCTGAGGAACAGCAGGGATACATCCTCACAGGAAACAACCCTCTAAGTCCAGAGAAGGGGAAGC  
 AGCTGATGGACCAAGTTGCCACATCCTCCGGGTACCTTCCAGCTTCTTTCAGATATCAAAGTTTTGGG  
 ACCAGCAGTGACCTTCAAAGTAAGTGCCAAACATCCAAAACATGACAACTGCCGATGTATCAAGGCTGCA  
 GCTGACAAACAAGACCAGCTGGAGAAGGCAACTGGACTGACAATCCTTCAAAGTGGAAATCAGGCCGAAGG  
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 TACAAGCTGAAGGACAAGTTGTCTGGACTAGGCGCTGACCCAGTGCAGATGCCACTGAAGCCTACCAGG  
 AGCTATGCCGCCAGCGTATGGCTGTTCTGCCACAGGACCCTCTGAGGGACCACATACATCAGCATCAA  
 CAGCGTCTCATCCAGTTTCCAGCATGGCCGATGCCTAGTCTTCCGGCTCGGAGCAGCACTTTCATCCTGG  
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 CTCACTTGTGGCCAGAGAGAGGAGAATGCACCAAGAACCGTTCCTGGCTGTGCTGACCTATGACCAC  
 TCCAGGATCCTGTGAAGTCTCAAACAGCCATGGCAGTCCGACTACATCAATGCCAGCCCCATTATGG  
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 GCGCCGGCAGGAGTGGAACTACGTCTGATTGACATGGTTCTCAATAAGATGGCCAAAGGTGCTAAAGA  
 GATTGATATCGCAGCGACCTGGAGCACTTGGAGGACCAGAGACCAGGCATGGTCCAGACAAAGGAGCAG  
 TTTGAGTTGCGCTGACAGCTGTGGCTGAGGAGGTGAATGCCATCCTGAAGGCCCTTCCCCAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR215745 protein sequence  
 Red=Cloning site Green=Tags(s)

MGPPPLLLLLLLLLPPPLPRALPAPASARGRQLPGRLGCLFEDGLCGSLETCVNDGVFGRQKVPVMDTYR  
 YEVPFGALLHLKVTLLQKLSRTGFTWQDDYTQRVIAQELANLPAKYLWHGETSGPPRSLQQNADNEKWFSL  
 EREVALAKTLRRYLPYLELLSQTPTANAHSRIDHETRPAGKEDSSPENILTYVAHTSALTYPPATRAKYP  
 DNLLRPF SRLQPDELSPKVDGIDKQKLI AALGAYTAQRLPGENDPEPRYL VHGSSRAPRPF SATALSQR  
 WPPPPGDAKDSMDDTLLQSLKDLQQNSEVDRLGPLKEEKADSVAGAIQSDPAEGSQESHGRGAEQ  
 PREQTDAPETMLQDHLSEVDDPVYKEVNRLSFQLGDLLKDYGSPLLPEGPLLEKSSREEIKKSEQPEEV  
 LSSEETAGVEHVRSTYSKDLFERKPNSEPPRRLEDQFQNRAPELWEDEESLKLAAQGGPPSGGLQLEV  
 QPSEEQQGYILTGNPLSPEKQKQKLMQVAHILRVPSSFFADIKVLGPAVTFKVSANIQNMTTADVIKAA  
 ADNKDQLEKATGLTILQSGIRPKGKLLPHQEEQEDSTKFILLTFLSIACILGVLLASSLAYCLRHNSH  
 YKLDKLSGLGADPSADATEAYQELCRQMAVRPQDRSEGPHTSRINSVSSQFSDGPMPSPSARSSTSSW  
 SEEPVQSNMIDISTGHMILAYMEDHLKKNRLEKEWEALCAYQAEPNSSLVAQREENAPKNRSLAVLTYDH  
 SRILLKSNHSGSSDYINASPIMDHPNPAYIATQGPLPATVADFWQMVWESGCAVIVMLTPLSENGVR  
 QCHHYWPDEGSNLVHVVYVNLVSEHIWCQDFLVRSFYLNKLNQTNETRTVTQFHFLSWYDQGVPSSTRSL  
 DFRRKVNKCYRGRSCPIIVHCSDGAGRSPTYVLIDMVLNMAKGAKEIDIAATLEHLRDRPQGMVQTKEQ  
 FEFALTAVAEVNAILKALPQ

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

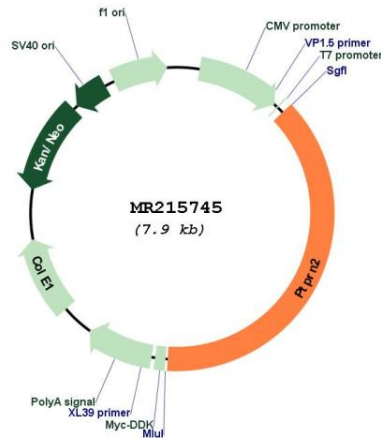
Sgfl-MluI



RefSeq ORF: 3006 bp  
 Locus ID: 19276  
 UniProt ID: [P80560](#)  
 Cytogenetics: 12 62.65 cM  
 MW: 111.6 kDa

**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]

**Product images:**



Circular map for MR215745