

## Product datasheet for MR231816

### Ptprs (NM\_001252455) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Ptprs (NM\_001252455) Mouse Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Ptprs  
**Synonyms:** AL022616; PTP; PTP-NU3; PTPNU-3; PTPsigma; Ptpt9; R-PTP-S; RPTPsigma  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**ORF Nucleotide Sequence:** >MR231816 representing NM\_001252455  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCGCGATCGCC

ATGGCGCCACCTGGAGTCCCAGCGTGGTGTCTGTGGTGGTCTGTGGGGCTCTTCTCGTACTGCTGG  
 CCAGAGGATGCTTGGCTGAAGAACCACCCAGGTTTATCAGAGAGCCCAAGGATCAGATTGGAGTGTCCGG  
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 AAGAAAGTGAACCTCACAGCGCTTCGAGACCATGACTTTGACGAGAGCTCTGGGGCGTCCCTGAGGATCC  
 AGCCACTTCGGACGCCTCGGGATGAGAAGTGTACGAGTGTGGCCAGAACTCGGTGGGCGAAATCAC  
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 TCCGTGGTACCCTGTCTACTATACCATGGAGCCGGAACACCCAGTGGGCAACTGGCAGAAACACAATGT  
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 TTCACGTCCGTGGGCGACGGACCACTGTGAGCCCATCCAGGTCAAGACCCAGCAGGGAGTTCTCTGGCC



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AGCCCATGAACCTTGC GGCTGAGGCCAAGTCAGAGACCAGCATTGGGCTCTCGTGGAGTGCACCACGACA  
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ATTATGCAACA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
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Protein Sequence: >MR231816 representing NM\_001252455  
 Red=Cloning site Green=Tags(s)

MAPTWSPSVVSVGPVGLFLVLLARGCLAEPPRFIREPKDQIGVSGGVASFVCQATGDPKPRVTWNKKG  
 KKVNSQRFETIDFDESSGAVLRIQPLRTPRDENVYECVAQNSVGEITIHAKLTVLREDQLPPGFNIDMG  
 PQLKVVERTRTATMLCAASGNPDPEITWFKDFLPVDPSASNGRIKQLRSGALQIESSEETDQGYECVAT  
 NSAGVRYSSPANLYVRRVRRVAPRF SILPMSHEIMPGGVNVITCVAVGSPMPYVKWMQGAEDLTPEDDMPV  
 GRNVLELTDVKDSANYTCVAMSSLGVIEAVAQITVKSLPKAPGTPVVTENTATSITVTWDSGNPDPVSY  
 YIEYKSKSQDGPYQIKEDITTTTRYSIGGLSPNSEYEWVSAVNSIGQPPSESVVTRTGEQAPASAPRNV  
 QARMLSATTMIVQWEEPVEPNLIRGYRVYTMPEHPVGNWQKHNVDSSLTTVGSLLLEDETYTVRVLA  
 FTSVGDGPLSDPIQVKTQQGVGPQPMNLRAEKSETSIGLSWSAPRQESVIKYEELFREGDRGREVGRTF  
 DPTTAFVVEDLKPNTHEYAFRLAARSPQGLGAFTAVVRQRTLQAI SPKNFKVKMIMKTSVLLSWEFPDNYN  
 SPTPYKIYNGLTLDVDGRTTKKLITHLKPHTFYNFVLTNRGSSLGGLQQTVTARTAFNMLSGKPSVAPK  
 PDNDGFI VVYLPDQSPVTVQNYFIVMPLRKS RGGQFPVLLGSPEDMDLEELIQDISRLQRRSLRHSRQ  
 LEVPRPYIAARFSILPAVFHPGNQKQYGGFDNRGLEPGHRYVLFVLA VLQKNEPTFAASPFSDPQLDNP  
 DPQPIVDGEEGLIWWIGPVLAVFIIICIVIAIILLYKNKRKDSEPRTKCLLNADLAPHHPKDPVEMRRIN  
 FQTPGMLSHPIPIITDMAEHMERLKANDSLKLSQEYESIDPGQQFTWEHSNLEANKPKNRYANVIAYDHS  
 RVILQPLEGIMGSDYINANYVDGYRRQNAVYIATQGPLPETFGDFWRMVWEQRSATVVMTRLEEKSRIC  
 DQYWPNRGTETYGF IQVTLTLDTMELATFCVRTFSLHKNGSSEKREVRHFQFTAWPDHGVPEYTPFLAFL  
 RRVKTCNPPDAGPIVVHCSAGVGRGTGCFIVIDAMLERIKTEKTVDVYGHVTLMRSQRNYMVQTEDQYGF  
 HEALLEAVGCGNTEVPARSLYTYIQKLAQVEPGEHVTGMELEFKRLASSKAHTSRFITASLPCNFKFNRL  
 VNILPYESSRVCLQPIRGVEGSDYINASFIDGYRQKAYIATQGPLAETTEDFWRALWENNSTIVVMLTK  
 LREMGREKCHQYWPAERSARYQYFVVDPMAEYNMPQYILREFKVTDARDGQSRTVRQFQFTDWPEQGAPK  
 SGEGFIDF IGQVHKTKEQFGDGPISVHCSAGVGRGTGVFITLSIVLERMRYEGVVDIFQTVKVLRTQRPA  
 MVQTEDEYQFCFQAAL EYLG SFDHYAT

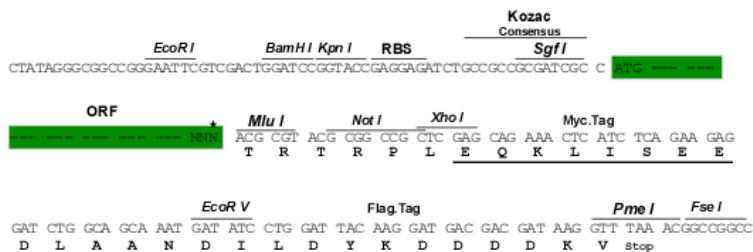
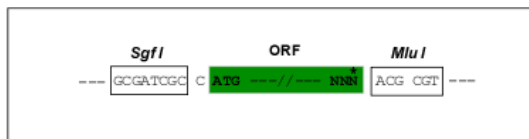
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

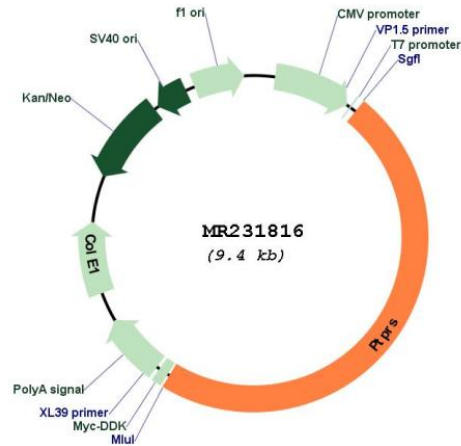
Cloning Scheme:

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN: NM\_001252455

ORF Size: 4491 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\\_001252455.1](#), [NP\\_001239384.1](#)

**RefSeq Size:** 5644 bp

**RefSeq ORF:** 4494 bp

**Locus ID:** 19280

**UniProt ID:** [B0V2N1](#)

**Cytogenetics:** 17 29.32 cM

**MW:** 168.3 kDa

**Gene Summary:** Cell surface receptor that binds to glycosaminoglycans, including chondroitin sulfate proteoglycans and heparan sulfate proteoglycans (PubMed:19833921, PubMed:21454754, PubMed:22406547). Binding to chondroitin sulfate and heparan sulfate proteoglycans has opposite effects on PTPRS oligomerization and regulation of neurite outgrowth (PubMed:21454754). Contributes to the inhibition of neurite and axonal outgrowth by chondroitin sulfate proteoglycans, also after nerve transection (PubMed:15797710, PubMed:19833921, PubMed:19780196, PubMed:21454754, PubMed:22519304, PubMed:22406547). Plays a role in stimulating neurite outgrowth in response to the heparan sulfate proteoglycan GPC2 (PubMed:21454754). Required for normal brain development, especially for normal development of the pituitary gland and the olfactory bulb (PubMed:10080191). Functions as tyrosine phosphatase (PubMed:7529177). Mediates dephosphorylation of NTRK1, NTRK2 and NTRK3 (By similarity). Plays a role in down-regulation of signaling cascades that lead to the activation of Akt and MAP kinases (PubMed:15797710). Down-regulates TLR9-mediated activation of NF-kappa-B, as well as production of TNF, interferon alpha and interferon beta (PubMed:26231120). [UniProtKB/Swiss-Prot Function]