

## Product datasheet for **MC229605**

### Ptprs (NM\_001252455) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Ptprs (NM_001252455) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Ptprs
Synonyms:	AL022616; PTP; PTP-NU3; PTPNU-3; PTPsigma; Ptpt9; R-PTP-S; RPTPsigma
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>MC229605 representing NM_001252455 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCGCCACCTGGAGTCCCAGCGTGGTGTCTGTGGTGGTCTGTGGGGCTCTTCTCGTACTGCTGG  
CCAGAGGATGCTTGGCTGAAGAACCACCCAGGTTATCAGAGAGCCCAAGGATCAGATTGGAGTGTCCGG  
AGGCGTGGCCTCCTTCGTGTGCCAGGCCACGGGTGATCCTAAGCCACGGGTGACCTGGAACAAGAAGGGC  
AAGAAAGTGAACACACAGCGCTTCGAGACCATTGACTTTGACGAGAGCTCTGGGGCGTCTCGAGGATCC  
AGCCACTTCGGACGCCTCGGGATGAGAAGTGTACGAGTGTGTGGCCAGAAGTCCGGTGGCGAAATCAC  
AATTCATGCAAAGCTCACCGTCCTTCGAGAGGACCAGCTGCCTCCTGGCTTCCCCAACATTGACATGGGC  
CCCCAGTTGAAGTTGTAGAGCGCACACGCACAGCCACCATGCTCTGTGCTGCCAGCGGGAACCCGGACC  
CTGAGATCACCTGGTTAAGGACTTCTGCCTGTGGACCCAGTCCAGCAACCGGCGGATCAAGCAGCT  
TCGATCAGGTGCCCTGCAGATTGAGAGCAGCGAGGAGACAGACCAGGGCAAGTACGAGTGTGTGGCCACC  
AACAGCGCTGGGTGCGCTACTCATCACCTGCCAACCTCTACGTGCGAGTCCGCCGTGTGGCCCCACGCT  
TCTCCATCCTGCCATGAGCCACGAGATCATGCCCGTGGGAATGTGAATACACTTGTGTGGCCGTGGG  
CTCACCCATGCCCTACGTGAAATGGATGCAGGGGGCCGAGGACCTGACGCCTGAGGATGACATGCCCGTG  
GGTCGGAATGTTCTAGAACTCACGGATGTCAAGGACTCAGCTAACTACACTTGTGTGGCCATGTCCAGCG  
TGGGTGTGATCGAGGCCGTGGCCAGATCACTGTAAAATCTCTCCCAAAGCCCTGGGACTCCTGTGGT  
GACGGAGAACAACCTGCCACCAGTATCACTGTACATGGGACTCGGGCAACCCTGACCCCGTGTCTACTAC  
GTAATTGAGTATAAGTCCAAAAGCCAGGATGGGCCGTATCAGATCAAAGAAGACATCACCACCACGCGCT  
ACAGCATCGGAGGCTGAGCCCCAATTCTGAGTATGAGATCTGGGTGTCAGCTGTCAACTCCATTGGCCA  
GGGCCCTCCAGTGAATCGTGGTGACCCGCACAGGTGAGCAGGCACCAGCCAGCGCTCCAGGAATGTT  
CAGGCCCGCATGCTCAGCGCCACCACATGATCGTGCAGTGGGAGGACCTGTGGAGCCCAATGGCCTGA  
TCCGTGGCTACCGTGTCTACTATACCATGGAGCCGGAACACCCAGTGGGCAACTGGCAGAAACACAATGT  
GGACGACAGTCTCCTGACCACTGTGGGCAGCCTGCTGGAAGACGAGACCTACACCGTGCAGTGTCTGCC



View online »

TTCACGTCGGTGGGCGACGGACCACTGTGACACCCATCCAGGTCAAGACCCAGCAGGGAGTTCCTGGCC  
 AGCCCATGAACTTGC GGCTGAGGCCAAGTCAGAGACCAGCATTGGGCTCTCGTGGAGTGCACCACGACA  
 GGAGAGTGTCAATTAAGTATGAACTGCTCTTCCGGGAGGGCGACCGAGGCCGAGAGGTGGGGCGAACCTTC  
 GACCCAACCACAGCCTTTGTGGTGGAGGACCTCAAGCCCAATACGGAGTATGCGTTCCGGCTGGCGGCGC  
 GCTCGCCGAGGGCCTGGGCGCCTTACC CGGTGCTGCGCCAGCGCACGCTGCAGGCCATCTCCCCAAA  
 GAACTTCAAGGTGAAGATGATCATGAAGACTTCAGTGTCTGAGCTGGGAGTCCCCGACAATAAAC  
 TCACCCACACCTACAAGATTCACTACAATGGGCTCACCTGGATGGGACGGCCGACGACCAAGAAGC  
 TGATCACACACCTCAAGCCACACACCTTCTATAATTTCTGCTCACCAACCGTGGCAGCAGCCTGGGGG  
 CCTGCAGCAGACGGTCACTGCCAGGACCGCTTTAACATGCTCAGTGGCAAGCCTAGCGTCGCCCCGAAG  
 CCCGACAATGACGGTTTCATCGTGGTCTACCTGCCTGATGGCCAGAGTCTGTGACCGTGCAGAATACT  
 TCATTGTGATGGTCCCCTTTCGGAAGTCTCGAGGTGGCCAGTTCCTGTCTACTAGGTAGTCCAGAGGA  
 CATGGATCTGGAGGAGCTCATCCAGGACATCTCCCGGCTGCAGAGGCGCAGCCTGCGCCACTCCAGACAG  
 CTGGAGGTGCCTCGCCCTACATCGCCGCTCGATTCTCCATCCTGCCAGTGTCTCCATCCTGGGAACC  
 AGAAGCAATATGGTGGCTTTGACAACAGGGGCTGGAGCCAGGCCACCGTATGCTCTTTGTGCTTGC  
 TGTGTTGAGAAGAATGAGCCTACATTTGCAGCCAGTCCCTTCTCAGACCCCTTCCAGCTGGACAACCCG  
 GACCTCAGCCATTGTGGACGGCGAGGAGGGCCTCATCTGGGTGATTGGCCTGTGCTGGCCGTGGTCT  
 TCATCATCTGCATCGTGATTGCCATCCTGCTGTACAAGAACAACGCAAGGACTCAGAGCCCCGACCAA  
 ATGCTTACTGAACAATGCCGACCTTGCCCCCATCACCCAAGGACCTGTGAAATGCGACGCATCAAC  
 TTCCAGACACCAGGTATGCTCAGCCACCCACCCATCCCCATCACAGACATGGCGGAGCAGATGGAGAGAC  
 TCAAAGCCAACGACAGCCTGAAGCTCTCCAGGAGTACGAGTCCATTGACCCCGGCAGCAATTCACGTG  
 GGAACATTCGAACCTGGAGGCCAACAAGCCCAAGAACCCTATGCCAACGTCATCGCCTATGACCACTCA  
 CGAGTCATCTGCAGCCCTAGAAGGCATCATGGGTAGTGATTACATCAATGCCAACTATGTGGCGGT  
 ACCGGGCGAGAAATGCATACATTTGCCACGCGAGGGCCCTGCCTGAGACCTTTGGGGATCTGGCGGAT  
 GGTGTGGGAGCAGCGATCGGCCACTGTGGTCTGATGACCGGACTGGAGGAGAAAATCACGGATCAAATGT  
 GACCAATACTGGCCTAACCGAGGACCGAGACATACGGCTTCATCCAGGTCACCCACTAGATACCATGG  
 AGCTGGCTACCTTCTGCGTCAGGACTTTTTCTCTACACAAGAATGGCTCTAGCGAGAAGCGTGAGGTGCG  
 ACATTTCCAGTTCACGGCATGGCCCGACCCAGGGTACCTGAGTACCCACGCCCCTTCTGGCATTCTCTG  
 CGAAGAGTCAAGACCTGCAACCCGCTGATGCTGGCCCCATTGTGGTCCACTGCAGCGCGGGTGTGGGGC  
 GCACTGGTGTCTCATCGTAATTGACGCCATGCTAGAGCGCATCAAGACAGAGAAGACCGTGGATGTGTA  
 TGGACATGTGACTCATGCGGTGCGAGCGCAACTACATGGTGCAGACAGAGGATCAGTATGGCTTCATC  
 CAGGAGGCGTGTGGAGGCTGTGGGCTGCGGCAATACCGAGTCCCTGCTCGCAGCCTCTACACCTACA  
 TCAGAAGCTGGCCAGGTGGAGCCTGGCGAGCAGTACGGGCATGGAGCTTGAGTTCAAGAGGCTCGC  
 CAGTTCGAAGGCACACACTTCGCGCTTCATCACCGCCAGCCTGCCTTGAACAAGTTAAGAACCAGCTG  
 GTGAACATCCTGCCGTACGAGAGCTCGCGTGTCTGCCTGCAGCCATCCGCGGTGTGGAGGGCTCTGACT  
 ACATCAATGCCAGCTTTATCGACGGCTATAGACAGCAGAAAGCCTACATTGCAACACAGGGGCCACTGGC  
 AGAGACCACAGAGGACTTCTGGCGAGCTCTGTGGGAGAACTACTACTATTGTCGTAATGCTCACCAAG  
 CTCCGAGAAATGGGCCGGGAAAAGTGCCACCAGTACTGGCCAGCCGAGCGCTCTGCCCGTACCAGTACT  
 TTGTGGTTGACCCGATGGCAGAGTATAACATGCCACAGTACATTTCTGCGTGAATTAAGGTACAGATGC  
 CCGGGATGGCCAGTCCCGGACCGTCCGACAGTCCAGTTCACGGACTGGCCAGAGCAGGGTGCACCCAAG  
 TCAGGGGAAGGCTTCATTGACTTCATCGGCCAAGTGCATAAGACCAAGGAGCAGTTTGGCCAGGACGGAC  
 CCATCTCAGTGCCTGCAGCGCCGAGTGGGACAGGACCGAGTGTTCATCACCCCTGAGCATCGTGTGTA  
 GCGGATGCGCTACGAGGGCGTGGTGGACATTTTCCAGACAGTGAAGGTGCTTCGGACCCAGAGGCCTGCC  
 ATGGTGCAGACAGAGGACGAGTACCAGTTCGCTTCCAGGCGGCTTTGGAATACCTGGGCAGTTTTGATC  
 ATTATGCAACA TAA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI  
**ACCN:** NM\_001252455  
**Insert Size:** 4494 bp

<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<b>OTI Annotation:</b>	Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.
<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>NM_001252455.1, NP_001239384.1</u>
<b>RefSeq Size:</b>	5644 bp
<b>RefSeq ORF:</b>	4494 bp
<b>Locus ID:</b>	19280
<b>UniProt ID:</b>	<u>B0V2N1</u>
<b>Cytogenetics:</b>	17 29.32 cM

**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]

Transcript Variant: This variant (3) lacks 5 exons in the coding region, but maintains the reading frame, compared to variant 1. The encoded isoform (3) is shorter than isoform 1.

Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.