

Product datasheet for MC229607

Ptprs (NM_001252453) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ptprs (NM_001252453) 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:	>MC229607 representing NM_001252453 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCGCCACCTGGAGTCCCAGCGTGGTGTCTGTGGTGGTCTGTGGGGCTTCTCTCGTACTGCTGG
CCAGAGGATGCTTGGCTGAAGAACCACCCAGGTTATCAGAGAGCCCAAGGATCAGATTGGAGTGTCCGG
AGGCGTGGCCTCCTTCGTGTGCCAGGCCACGGGTATCCTAAGCCACGGGTGACCTGGAACAAGAAGGGC
AAGAAAGTGAACACAGCGCTTCGAGACCATTGACTTTGACGAGAGCTCTGGGGCGTCTCTGAGGATCC
AGCCACTTCGGACGCCTCGGGATGAGAAGTGTACGAGTGTGTGGCCAGAAGTCCGGTGGCGAAATCAC
AATTCATGCAAAGCTCACCGTCTTCGAGAGGACCAGCTGCCTCTGGCTTCCCCAACATTGACATGGGC
CCCCAGTTGAAGTTGTAGAGCGCACACGCACAGCCACCATGCTCTGTGCTGCCAGCGGGAACCCGGACC
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TCGATCAGGTGCCCTGCAGATTGAGAGCAGCGAGGAGACAGACCAGGCAAGTACGAGTGTGTGGCCACC
AACAGCGCTGGGTGCGCTACTCATCACCTGCCAACCTCTACGTGCGAGTCCGCCGTGTGGCCCCACGCT
TCTCCATCCTGCCATGAGCCACGAGATCATGCCCGTGGGAATGTGAATACACTTGTGTGGCCGTGGG
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GTAATTGAGTATAAGTCCAAAAGCCAGGATGGGCCGTATCAGATCAAAGAAGACATCACCACCACGCGCT
ACAGCATCGGAGGCTGAGCCCCAATTCTGAGTATGAGATCTGGGTGTCAGCTGTCAACTCCATTGGCCA
GGGCCCTCCAGTGAATCGTGGTGAACCCGACAGGTGAGCAGGCACCAGCCAGCGCTCCAGGAATGTT
CAGGCCCGCATGCTCAGCGCCACCACATGATCGTGCAGTGGGAGGACCTGTGGAGCCCAATGGCCTGA
TCCGTGGCTACCGTGTCTACTATACCATGGAGCCGGAACACCCAGTGGGCAACTGGCAGAAACACAATGT
GGACGACAGTCTCTGACCACTGTGGGCAGCCTGCTGGAAGACGAGACCTACACCGTGCCTGTCTGCC



TTCACGTCGGTGGGCGACGGACCACTGTGACACCCATCCAGGTCAAGACCCAGCAGGGAGTTCCTGGCC
 AGCCCATGAACTTGC GGCTGAGGCCAAGTCAGAGACCAGCATTGGGCTCTCGTGGAGTGCACCACGACA
 GGAGAGTGTCAATTAAGTATGAACTGCTCTTCCGGGAGGGCGACCGAGGCCGAGAGGTGGGGCAACCTTC
 GACCCAACCACAGCCTTTGTGGTGGAGGACCTCAAGCCCAATACGGAGTATGCGTTCCGGCTGGCGGCGC
 GCTCGCCGACGGGCTGGGCGCCTTACC CGGTGCTGCGCCAGCGCACGCTGCAGGCCATCTCCCCAAA
 GAACTTCAAGGTGAAGATGATCATGAAGACTTCAGTGTCTGAGCTGGGAGTCCCCGACAATAAAC
 TCACCCACACCTACAAGATTCACTACAATGGGCTCACCTGGATGTGGACGGCCGACGACCAAGAAGC
 TGATCACACACCTCAAGCCACACACCTTCTATAATTTCTGCTACCAACCGTGGCAGCAGCCTGGGGGG
 CCTGCAGCAGACGGTCACTGCCAGGACCGCTTTAACATGCTCAGTGGCAAGCCTAGCGTCGCCCGAAG
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 TGTGTTGAGAAGAATGAGCCTACATTTGACGCCAGTCCCTTCTCAGACCCCTTCCAGCTGGACAACCCG
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 TCATCATCTGCATCGTGATTGCCATCCTGCTGTACAAGAACAACCTGACAGCAAACGCAAGGACTCAGA
 GCCCGCACCAAAATGCTTACTGAACAATGCCGACCTTGCCCCCATACCCCAAGGACCTGTGGAAATG
 CGACGCATCAACTTCAGACACCAGGTATGCTCAGCCACCCACCCATCCCATCAGACATGGCGGAGC
 ACATGGAGAGACTCAAAGCCAACGACAGCCTGAAGCTCTCCAGGAGTACGAGTCCATTGACCCCGGGA
 GCAATTCACGTGGGAACATTCGAACCTGGAGGCCAACAAGCCCAAGAACCGCTATGCCAAGTATCGCC
 TATGACCACTCAGGATCATCTGCAGCCCTAGAAGGCATCATGGGTAGTGATTACATCAATGCCAACT
 ATGTGACGGCTACCGCGGCAGAATGCATACATTGCCACGAGGGCCCTGCCTGAGACCTTTGGGGA
 CTCTGCGGATGGTGTGGGAGCAGCGATCGGCCACTGTGGTCA TGATGACGCGACTGGAGGAGAAATCA
 CGGATCAAATGTGACCAATACTGGCCTAACCGAGGCACCGAGACATACGGCTTATCCAGGTACCCCTAC
 TAGATACCATGGAGCTGGCTACCTTCTGCGTCAGGACTTTTTCTTACACAAGAATGGCTTAGCGAGAA
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 CTGGCATTCTGCGAAGAGTCAAGACCTGCAACCCGCCTGATGCTGGCCCATTTGGTCCACTGCAGCG
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 CGTGGATGTGATGGACATGTGACTCATGCGGTGCGAGCGCAACTACATGGTGCAGACAGAGGATCAG
 TATGGCTTATCCACGAGGCGCTGCTGGAGGCTGTGGGCTGCGGCAATACCGAGTCCCTGCTCGCAGCC
 TCTACACCTACATCCAGAAGCTGGCCAGGTGGAGCCTGGCGAGCACGTACGGGATGGAGCTTGAGTT
 CAAGAGGCTCGCCAGTTC AAGGCACACACTTCGCGCTTATCACCGCCAGCCTGCCTTGAACAAGTTT
 AAGAACCAGTGGTGAACATCCTGCCGTACGAGAGCTCGCGTGTCTGCCTGCAGCCATCCGCGGTGTGG
 AGGGCTGACTACATCAATGCCAGTTTATCGACGGCTATAGACAGCAGAAAAGCCTACATTGCAACACA
 GGGGCCACTGGCAGAGACCACAGAGGACTTCTGGCGAGCTCTGTGGGAGAACAACCTACTATTGTGCTA
 ATGCTACCAAGTCCGAGAAAATGGGCCGGAAAAGTGCCACCAGTACTGGCCAGCCGAGCGCTCTGCC
 GCTACCAAGTACTTTGTGGTTGACCCGATGGCAGAGTATAACATGCCACAGTACATTCTGCGTGAGTTAA
 GGTACAGATGCCCGGATGGCCAGTCCCGGACCGTCCGACAGTCCAGTTCAGTTCACGGACTGGCCAGACG
 GGTGCACCCAAGTCAAGGGAAGGCTTATTGACTTCAATCGCCAAAGTGCAATAAGACCAAGGAGCAGTTG
 GCCAGGACGACCCATCTCAGTGCAGTGCAGCGCCGAGTGGGCAGGACCGGAGTGTTCATCACCTGAG
 CATCGTCTTGTAGCGGATGCGCTACGAGGGCGTGGTGGACATTTTCCAGACAGTGAAGGTGCTTCGGACC
 CAGAGGCTGCCATGGTGCAGACAGAGGACGAGTACCAGTTCTGCTTCCAGGCGGCTTTGGAATACCTGG
 GCAGTTTTGATCATTATGCAACA TAA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_001252453
Insert Size: 4506 bp

OTI Disclaimer:	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).
OTI Annotation:	Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.
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:	<ol style="list-style-type: none"> 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:	<u>NM_001252453.1, NP_001239382.1</u>
RefSeq Size:	5656 bp
RefSeq ORF:	4506 bp
Locus ID:	19280
UniProt ID:	<u>B0V2N1</u>
Cytogenetics:	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 (2) lacks four consecutive exons in the coding region, but maintains the reading frame, compared to variant 1. Variants 2 and 4 encode the same isoform (2), which 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.