

## Product datasheet for **MR210734**

### **Ptpn22 (NM\_008979) Mouse Tagged ORF Clone**

#### **Product data:**

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids                       |
| Product Name:             | Ptpn22 (NM_008979) Mouse Tagged ORF Clone |
| Tag:                      | Myc-DDK                                   |
| Symbol:                   | Ptpn22                                    |
| Synonyms:                 | 70zpep; PEP; Ptpn8                        |
| Mammalian Cell Selection: | Neomycin                                  |
| Vector:                   | pCMV6-Entry (PS100001)                    |
| E. coli Selection:        | Kanamycin (25 ug/mL)                      |



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ORF Nucleotide  
Sequence:

>MR210734 representing NM\_008979  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGACCAAGAGAAATTCTGCAGCAACTACTGAAAGAAGCCAGAAAAAGAACTCAACAGTGAGGAGT  
 TTGCCAGTGAATTTCTGAAGCTGAAAAGGCAATCCACCAAGTACAAGGCCGACAAAATCTATCCTACAAC  
 TGTGGCTCAGAGGCCAAGAATATCAAGAAAAACAGATACAAGGATATTTTGCCTATGATCACAGCCTG  
 GTAGAGCTGTCTTTGTTAACTTCCGATGAGGATCCAGTTACATCAATGCCAGCTTTATTAGGGTGTCT  
 ATGGACCAAGGCTTATATTGCTACCCAGGCTCTTTATCTACAACCTCCTGGACTTCTGGAGGATGAT  
 TTGGGAGTACCGCATCTGGTCATTGTCATGGCATGTATGGAGTTTGAATGGGAAAGAAAAATGTGAG  
 CATTATTGGGCCGAACCAGGAGAAACGCAGCTGCAATTTGGCCCTTTTCTATATCCTGTGAAGCTGAGA  
 AAAAGAAATCTGATTATAAAATCAGGACTCTGAAGGCCAAGTTCAATAATGAAACTCGAATTATTTACCA  
 GTTTCATTATAAGAATTGGCCAGACCATGATGTGCCTTCATCTATAGACCCTATTCTTCAGCTCATCTGG  
 GATATGCGTTGTTACCAAGAAGATGACTGTGTTCTATATGCATTCACTGCAAGTCCGGCTGCGGAAGGA  
 CAGGTGTCATTTGTGCTGTTGATTATACATGGATGCTGCTGAAAGATGGGATAATTCCTAAGAACTTCAG  
 TGTTTTAATTTGATTACAGGAGATGCGAACACAGAGGCCCTTCGCTAGTTCAAACTCAGGAACAGTACGAA  
 CTGGTCTACAGTGTGTTAGAGCTGTTAAGAGGCACATGGATGTTATCTCTGATAATCACCTTGGAA  
 GAGAGATCAAGCACAATGCTCAATTCCTGAACAAAGCCTCACGGTAGAAGCTGACTCTTGTCTCTGGA  
 TTTACCAAAAAACGCCATGAGGGATGTGAAAACGACAAACCAGCATAGCAACAAGGGGCTGAAGCGGAG  
 AGCACTGGAGGGTCTTCCCTTGGCCTTAGGACTTCTACGATGAATGCCGAGGAAGAGTTGGTTTTGCACT  
 CGGCTAAATCAAGCCCTCTTTTTAACTGTTTAGAGCTAAACTGCGGGTGTAAACAACAAGGCTGCATAAC  
 CAGGAACGGGCAGGCAAGGGCTTCTCCAGTCGTGGGAGAGCCCTTCAGAAGTATCAAAGTCTGGATTTT  
 GGTTCATGTTGTTGGGTGCTGCTAGTGTCTGCCATAAACACAGCGGACAGGTATACAATTCAA  
 AGGGGCCGGTAAACGGACCAAATCAACTCCCTTTGAACTGATTACAGCAGAGAAAAACAAATGACTTGGC  
 CGTGGGAGACGGTTTTTCATGCCTGGAATCTCAGCTGCATGAGCATTACAGTCTCAGGGAGTTGCAGGTG  
 CAAAGAGTGGCCATGTTTCTCAGAAGAGCTGAATTATTCACTGCCTGGTGCCTGTGATGCGTCTGTG  
 TGCCCCGGCACAGCCCCGGCGCTTGGAGTGCATCTGTACACATCTTACGGGAAGATCCTTATTTTTTC  
 ATCATCCCCTCCGAATAGTGTGATTGGAAGATGCTTTTTGATCTGCCTGAGAAACAGGATGGAGCCACT  
 TCCCCTGGCGCTCTATTGCCAGCCTCTTCTACAACCTCCTCTTTTATAGCAACCACAGACTCCCTAG  
 TGATGAACACTCTGACCAGCTTTTCCCCACCGTTAAACCAAGAGACAGCTGTAGAAGCTCCTTCTCGGAG  
 GACAGATGATGAAATCCCCCGCCACTCCTGAAACGGACACCCGAGTCTTTTATTGTGGTTGAGGAAGCC  
 GGAGAGCCCTCACACGTGTACCGAATCCTTACCTCTGGTGGTAAACATTTGGAGCATCACCAGAATGCA  
 GTGGGACATCTGAAATGAAGAGCCATGACTCTGTAGGGTTTACACCAAGCAAGAAATGTGAAACTCCGAAG  
 TCCCAAATCAGATCGACATCAGGATGGTTCTCCTCCACCTCCTCTCCAGAAAGAACTCTAGAGTCTTCT  
 TTTCTTGCTGATGAGGACTGTATACAGGCCAAGCCGTGCAAACCTTCTTACTAGCTATCCTGAAACCA  
 CAGAGAACTCCACATCTTCTAAACAAACATTGAGGACCCCTGGAAAAAGTTTCAACAAGGAGTAAGAGTTT  
 GAAGATTTTTCGAAATATGAAAAAAGTGTCTGTAATTTCTCCTACCAAGCAAGCCTACAGAACGTGT  
 CAGCCAAAAAATCCAGCTCCTTTCTGAATTTTGGTTTCGGAAATCGTTTTTCAAACCCAAAGGACCAA  
 GGAACCCGCCATCAGCTTGAATATG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >MR210734 representing NM\_008979  
Red=Cloning site Green=Tags(s)

MDQREILQQLKEAQKKLNSEEFASEFLKLRQSTKYKADKIYPTTVAQRPKNIKKNRYKDILPYDHS  
VELSLLTSDSDSSYINASFIQGVYGPKAYIATQGPLSTLLDFWRMIWEYRILVIVMACMEFEMGKKKCE  
HYWAEPGETQLQFGPFSISCEAEKKKSDYKIRTLKAKFNNETRIIYQFHYKNWPDHDVPSIDPILQLIW  
DMRCYQEDDCVPICIHCSAGCGRTGVICAVDYTWMLLKDGIIPKNFSVFNLIQEMRTQRPSTLVQTQEY  
LVYSAVLELFRHMDVISDNHLGREIQAQCSIPEQSLTVEADSCPLDLPKNAMRDVKTTNQHSKQGAEAE  
STGGSSGLRSTMNAAEELVLHSAKSSPSFNCLLNCGCNNKAVITRNGQARASPVVGEPLQKYQSLDF  
GSMLFGSCPSALPINTADRYHNSKGPVKRKTSTPFELIQQRKTNDLAVGDGFSCLSQLHEHYSRELQV  
QRVAHVSSEELNYS LPGACDASCVPRHSPGALRVHLYTSLAEDPYFSSSPPNSADSKMSFDLPEKQDGAT  
SPGALLPASSTTSFFYSNPHDSLVMNTLTSFSPPLNQETA VEAPSRRTDDEIPPLPERTPESFIVVEEA  
GEPSPRVTESLPLVVTFGASPECSGTSEMKSHDSVGFTPSKNVKLRSPKSDRHQDGSPPPPLPERTLESF  
FLADEDCIQAQAVQTSSTSYPETTENSTSSKQTLRTPGKSFTRSKSLKIFRNMKKSVCNSSSPSKPTERV  
QPKNSSSFLNFGFGRFSGPKGPRNPPSAWNM

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/ja1739\\_e04.zip](https://cdn.origene.com/chromatograms/ja1739_e04.zip)

**Restriction Sites:** Sgfl-Mlul

Cloning Scheme:



ACCN: NM\_008979

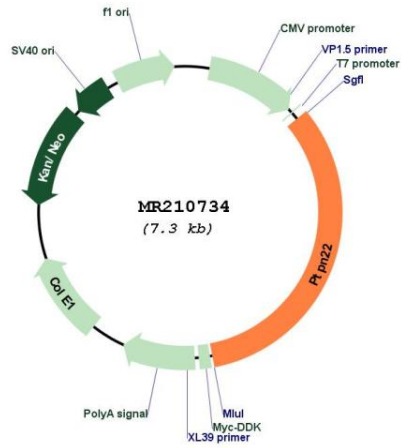
ORF Size: 2406 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

|                               |  |
|-------------------------------|--|
| <b>OTI Annotation:</b>        | This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.   |
| <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><a href="#">NM_008979.1</a></u> , <u><a href="#">NM_008979.2</a></u> , <u><a href="#">NP_033005.1</a></u>   |
| <b>RefSeq Size:</b>           | 2734 bp  |
| <b>RefSeq ORF:</b>            | 2409 bp  |
| <b>Locus ID:</b>              | 19260  |
| <b>UniProt ID:</b>            | <u><a href="#">P29352</a></u>  |
| <b>Cytogenetics:</b>          | 3 F2.2   |
| <b>MW:</b>                    | 90.2 kDa   |
| <b>Gene Summary:</b>          | Acts as negative regulator of T-cell receptor (TCR) signaling by direct dephosphorylation of the Src family kinases LCK and FYN, ITAMs of the TCRz/CD3 complex, as well as ZAP70, VAV, VCP and other key signaling molecules (By similarity). Associates with and probably dephosphorylates CBL (By similarity). Dephosphorylates LCK at its activating 'Tyr-394' residue (By similarity). Dephosphorylates ZAP70 at its activating 'Tyr-492' residue (By similarity). Dephosphorylates the immune system activator SKAP2 (By similarity). Positively regulates toll-like receptor (TLR)-induced type 1 interferon production (PubMed:23871208). Promotes host antiviral responses mediated by type 1 interferon (PubMed:23871208). Regulates NOD2-induced pro-inflammatory cytokine secretion and autophagy (PubMed:23991106).<br>[UniProtKB/Swiss-Prot Function] |

Product images:



Circular map for MR210734