

## Product datasheet for RC209090

### Phosphoserine phosphatase (PSPH) (NM\_004577) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Phosphoserine phosphatase (PSPH) (NM_004577) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Phosphoserine phosphatase
Synonyms:	PSP; PSPHD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC209090 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGTCTCCCACTCAGAGCTGAGGAAGCTTTTCTACTCAGCAGATGCTGTGTGTTTTGATGTTGACAGCA  
CGGTCACTCAGAGAAGAAGGAATCGATGAGCTAGCCAAAATCTGTGGCGTTGAGGACGCGGTGCAGAAAT  
GACACGGCGAGCCATGGGCGGGCAGTGCCTTTCAAAGCTGCTCTCACAGAGCGTTAGCCCTCATCCAG  
CCCTCCAGGGAGCAGGTGCAGAGACTCATAGCAGAGCAACCCCCACACCTGACCCCCGGCATAAGGGAGC  
TGTAAGTCGCCTACAGGAGCGAAATGTTCAAGTTTTCTAATATCTGGTGGCTTTAGGAGTATTGTAGA  
GCATGTTGCTTCAAAGCTCAATATCCCAGCAACCAATGTATTTGCCAATAGGCTGAAATTCTACTTTAAC  
GGTGAATATGCAGTTTTGATGAGACGCAGCAACAGCTGAATCTGGTGGAAAAGGAAAAGTGATTAAC  
TTTTAAAGGAAAAATTCATTTTAAAGAAAATAATCATGATTGGAGATGGTCCACAGATATGGAAGCCTG  
TCCTCCTGCTGATGCTTTCATTGGATTTGGAGGAAATGTGATCAGGCAACAAGTCAAGGATAACGCCAAA  
TGGTATATCACTGATTTTGTAGAGCTGCTGGGAGAACTGGAAGAA

**ACGCGT**ACGCGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC209090 protein sequence  
 Red=Cloning site Green=Tags(s)

MVSHSELRKL FYSADAVCFD VDVSTVIREEGIDELAKICGVEDAVSEMTRAMGGAVPFKAALTERLALIQ  
 PSREQVQRLIAEQPHLTPGIRELVSR LQERNVQVFLISGGFRSIVEHVASKLNIPATNVFANRLKFYFN  
 GEYAGFDETPTAESGGKGVIKLLKEKFHFKKIIMIGDGATDMEACPPADAFIGFGGNVIRQQVKDNAK  
 WYITDFVELLGELEE

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6860\\_a09.zip](https://cdn.origene.com/chromatograms/mk6860_a09.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_004577

**ORF Size:** 675 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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_004577.4](#)

**RefSeq Size:** 2142 bp

**RefSeq ORF:** 678 bp

**Locus ID:** 5723

**UniProt ID:** [P78330](#)

**Cytogenetics:** 7p11.2

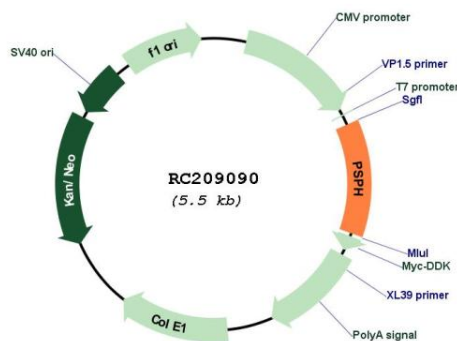
**Protein Families:** Druggable Genome, Phosphatase

**Protein Pathways:** Glycine, serine and threonine metabolism, Metabolic pathways

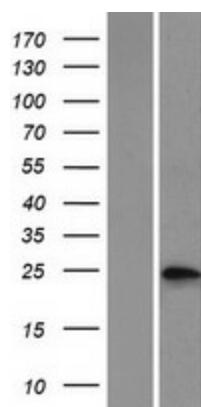
**MW:** 25 kDa

**Gene Summary:** The protein encoded by this gene belongs to a subfamily of the phosphotransferases. This encoded enzyme is responsible for the third and last step in L-serine formation. It catalyzes magnesium-dependent hydrolysis of L-phosphoserine and is also involved in an exchange reaction between L-serine and L-phosphoserine. Deficiency of this protein is thought to be linked to Williams syndrome. [provided by RefSeq, Jul 2008]

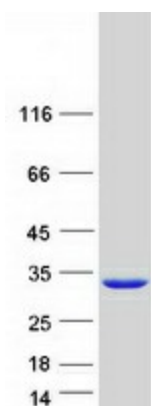
## Product images:



Circular map for RC209090



Western blot validation of overexpression lysate (Cat# [LY417896]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC209090 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PSPH protein (Cat# [TP309090]). The protein was produced from HEK293T cells transfected with PSPH cDNA clone (Cat# RC209090) using MegaTran 2.0 (Cat# [TT210002]).