

## Product datasheet for **RG212986**

### PSAP (NM\_001042465) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	PSAP (NM_001042465) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	PSAP
Synonyms:	GLBA; SAP1; SAP2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG212986 representing NM\_001042465  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGTACGCCCTCTTCCTCCTGGCCAGCCTCCTGGCGCGGCTCTAGCCGCCCGGTCTTGGACTGAAAG  
 AATGCACCAGGGCTCGGCAGTGTGGTGCAGAATGTGAAGACGGCGTCCGACTGCGGGGAGTGAAGCA  
 CTGCCTGCAGACCGTTTGGAAACAAGCCAACAGTAAATCCCTTCCTGCGACATATGCAAAGACGTTGTC  
 ACCGCAGCTGGTATGCTGAAGGACAATGCCACTGAGGAGGAGATCCTTGTACTTGGAGAAGACCT  
 GTGACTGGCTTCCGAAACCAACATGTCTGCTTCAAGGAGATAGTGGACTCCTACCTCCCTGTCAT  
 CCTGGACATCATTAAAGGAGAAATGAGCCGTCTGGGGAGGTGTGCTCTGCTCTCAACCTCTGCGAGTCT  
 CTCCAGAAGCACCTAGCAGAGCTGAATCACCAGAAGCAGCTGGAGTCCAATAAGATCCCAGAGCTGGACA  
 TGACTGAGGTGGTGGCCCTTCATGGCCAACATCCCTCTCCTCCTACCTCAGGACGGCCCCCGCAG  
 CAAGCCCCAGCCAAAGGATAATGGGGACGTTTCCAGGACTGCATTGAGTGGTACTGACATCCAGACT  
 GCTGTACGGACCAACTCCACCTTTGTCCAGGCCTTGGTGGAAACATGTCAAGGAGGAGTGTACCCGCTGG  
 GCCCTGGCATGGCCGACATATGCAAGAATATATCAGCCAGTATTCTGAAATTGCTATCCAGATGATGAT  
 GCATGACAGGATCAGCAACCAAGGAGATCTGTGCGCTGGTGGGTTCTGTGATGAGGTGAAAGAGATG  
 CCCATGCAGACTCTGGTCCCCGCCAAAGTGGCCTCCAAGAATGTCATCCCTGCCCTGGAAGTGGTGGAGC  
 CCATTAAGAAGCACGAGGTCCCAGCAAAGTCTGATGTTTACTGTGAGGTGTGGAATTCCTGGTGAAGGA  
 GGTGACCAAGCTGATTGACAACAAGACTGAGAAAGAAATACTCGACGCTTTTGACAAAATGTGCTCG  
 AAGTGCCGAAGTCCCTGTGCGAAGAGTGCCAGGAGGTGGTGGACACGTACGGCAGCTCCATCCTGTCCA  
 TCCTGTGGAGGAGTCAAGCTGAGCTGGTGTGACGATGCTGCACCTCTGCTCTGGCAGCGGGTGGC  
 TGCACTGACCGTTACGTGACTCAGCCAAAGGACGGTGGCTTCTGCGAAGTGTGCAAGAAGCTGGTGGGT  
 TATTTGGATCGAACCTGGAGAAAAACAGCACCAAGCAGGAGATCCTGGCTGCTCTTGGAAAGGCTGCA  
 GCTTCTGCCAGACCTTACCAGAAGCAGTGTGATCAGTTTGTGGCAGAGTACGAGCCCGTCTGATCGA  
 GATCCTGGTGGAGGTGATGGATCCTTCTTGTGTGCTTGAATAATGGAGCCTGCCCTCGGCCATAAG  
 CCCTTGTGGAACTGAGAAGTGTATATGGGGCCCAAGCTACTGGTGCCAGAACACAGAGACAGCAGCCC  
 AGTGAATGCTGTCGAGCATTGCAAACGCCATGTGTGGAAC

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>RG212986 representing NM\_001042465  
 Red=Cloning site Green=Tags(s)

MYALFLLASLLGAALAGPVLGLKECTRGSVAVWCQNVKTASDCGAVKHCLQTVWNKPTVKSPLPCDICKDVV  
 TAAGDMLKDNATEEEILVYLEKTCDWLKPENMSASCKEIVDSYLPVILDIKEMSRPGEVCSALNLCES  
 LQKHLAELNHQKQLESNKIPELDMTEVVAPFMANIPLLLYPQDGPSPKQPKDNGDVCQDCIQMVTDIQT  
 AVRTNSTFVQALVEHVKEECDRLGPGMADICKNYISQYSEIAIQMMHMMDQPKKEICALVGFCEVKEM  
 PMQTLVPAKVASKNVIPALELVEPIKKHEVPAKSDVYCEVCEFLVKEVTKLIDNNKTEKEILDAFDKMSC  
 KLPKSLSEECQEVVDYGSILSILLEEVSPVCSMLHLCSGTRLPALTVHVTQPKDGGFCEVCKLVLG  
 YLDRNLEKNSTKQEILAALEKGCFLPDPYQKQCDQFVAEYEPVLEILVEVMDPSFVCLKIGACPSAHK  
 PLLGTEKCIWGPSYWCQNTETAQCNAVEHCKRHVWN

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

Sgfl-MluI



<b>ACCN:</b>	NM_001042465
<b>ORF Size:</b>	1581 bp
<b>OTI Disclaimer:</b>	<p>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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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. <a href="#">More info</a></p>
<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>	<a href="#">NM_001042465.3</a>
<b>RefSeq Size:</b>	2848 bp
<b>RefSeq ORF:</b>	1584 bp
<b>Locus ID:</b>	5660
<b>UniProt ID:</b>	<a href="#">P07602</a>
<b>Cytogenetics:</b>	10q22.1
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Lysosome

**Gene Summary:**

This gene encodes a highly conserved preproprotein that is proteolytically processed to generate four main cleavage products including saposins A, B, C, and D. Each domain of the precursor protein is approximately 80 amino acid residues long with nearly identical placement of cysteine residues and glycosylation sites. Saposins A-D localize primarily to the lysosomal compartment where they facilitate the catabolism of glycosphingolipids with short oligosaccharide groups. The precursor protein exists both as a secretory protein and as an integral membrane protein and has neurotrophic activities. Mutations in this gene have been associated with Gaucher disease and metachromatic leukodystrophy. Alternative splicing results in multiple transcript variants, at least one of which encodes an isoform that is proteolytically processed. [provided by RefSeq, Feb 2016]