

Product datasheet for **MG207460**

Psen1 (NM_008943) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Psen1 (NM_008943) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Psen1
Synonyms:	Ad3h; PS-1; PS1; S182
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG207460 representing NM_008943
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGACAGAGATACCTGCACCTTTGTCTACTTCCAGAATGCCAGATGTCTGAGGACAGCCACTCCAGCA
 GCGCCATCCGGAGCCAGAATGACAGCCAAGAACGGCAGCAGCAGCATGACAGGCAGAGACTTGACAACCC
 TGAGCCAATATCTAATGGGCGGCCCCAGAGTAACTCAAGACAGGTGGTGGAAACAAGATGAGGAGGAAGAC
 GAAGAGCTGACATTGAAATATGGAGCCAAGCATGTCATCATGCTCTTTGTCCCGTGACCCTCTGCATGG
 TCGTCGTCGTGGCCACCATCAAATCAGTCAGCTTCTATACCCGGAAGGACGGTCAGCTAATCTACACCCC
 ATTCACAGAAGACACTGAGACTGTAGGCCAAAGAGCCCTGCCTCGATCCTGAATGCGGCCATCATGATC
 AGTGTCTTGTGATTATGACCATCCTCCTGGTGGTCTGTATAAATACAGGTGCTACAAGGTCATCCAGC
 CCTGGCTTATTATTTTCATCTCTGTTGTTGCTGTTCTTTTTTCGTTCACTTACTAGGGGAAGTATTTAA
 GACCTACAATGTGCGCGTGGACTACGTTACAGTAGCACTCCTAATCTGGAATTTTGGTGTGGTGGGATG
 ATTGCCATCCACTGGAAGGCCCTTCGACTGCAGCAGGCGTATCTCATTATGATCAGTGCCCTCATGG
 CCCTGGTATTTATCAAGTACCTCCCGAATGGACCGCATGGCTCATCTTGGCTGTGATTTAGTATATGA
 TTTGGTGGCTGTTTTATGTCCAAAGGCCCACTTCGATGCTGGTTGAAACAGCTCAGGAAAGAAATGAG
 ACTCTCTTTCCAGCTCTTATCTATTCTCAACAATGGTGTGGTGGTGAATATGGCTGAAGGAGACCCAG
 AAGCCAAAGGAGGGTACCCAAGAACCCTAAGTATAACACACAAGAGCGGAGAGAGACACAGGACAG
 TGGTCTGGGAACGATGATGGTGGCTTCAGTGAGGAGTGGGAGGCCAAAGAGACAGTCACTGGGGCT
 CATCGCTCCACTCCCGAGTCAAGAGTGTGTCCAGGAACCTTTCTGGGAGCATTCTAACGAGTGAAGACC
 CGGAGGAAAGAGGAGTAAAACCTGGACTGGGAGATTTTCATTTTCTACAGTGTCTGGTGAAGGCTC
 AGCAACCGCCAGTGGAGACTGGAACACAACCATAGCCTGCTTTGTAGCCATACTGATCGGCCTGTGCCTT
 ACATTACTCTGCTCGCCATTTTCAAGAAAGCGTTGCCAGCCCTCCCATCTCCATCACCTTCGGGCTCG
 GTTCTACTTCGCCACGGATTACCTTGTGCAGCCCTTCATGGACCAACTTGCATTCCATCAGTTTTATAT
 C

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG207460 representing NM_008943
 Red=Cloning site Green=Tags(s)

MTEIPAPLSYFQNAQMSSESHSSSAIRSQNDSQERQQQHDRQRLDNPEPISNGRPQSNRQVVEQDEEED
 EELTLKYGAKHVIMLFVPVTLCMVVVATIKSVSFYTRKDGQLIYTPFTEDTETVGQRALHSILNAAIMI
 SVIVIMTILLVLYKYRCYKVIHAWLIISLLLLFFFYIYLGEVFKTYNVAVDYVTVALLIWNFGVVGM
 IAIHWKGPLRLQQAYLIMISALMALVFIKYLPEWTAWLILAVISVYDLVAVLCPKGPLRMLVETAQERNE
 TLFPALIYSSTMVWLVNMAEGDPEAQRVPKPKYNTQRAERETQDSGSGNDDGGFSEEWEAQRDShLGP
 HRSTPESRAAVQELSGSILTSEDPEERGVKLGDFIFYSVLVGKASATASGDWNTTIACFVAILIGLCL
 TLLLLAIFFKALPALPISITFGLVFYFATDYLVPFMDQLAFHQFYI

TRTRPLE - GFP Tag - V

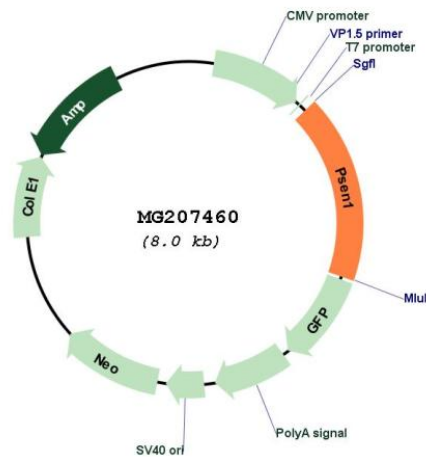
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_008943

ORF Size: 1401 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.

RefSeq: [NM_008943.2](#), [NP_032969.1](#)

RefSeq Size: 3023 bp

RefSeq ORF: 1404 bp

Locus ID: 19164

UniProt ID: [P49769](#)

Cytogenetics: 12 38.84 cM

Gene Summary: Catalytic subunit of the gamma-secretase complex, an endoprotease complex that catalyzes the intramembrane cleavage of integral membrane proteins such as Notch receptors and APP (amyloid-beta precursor protein). Requires the presence of the other members of the gamma-secretase complex for protease activity (By similarity). Plays a role in Notch and Wnt signaling cascades and regulation of downstream processes via its role in processing key regulatory proteins, and by regulating cytosolic CTNNB1 levels (PubMed:10421573, PubMed:11517342). Stimulates cell-cell adhesion via its interaction with CDH1; this stabilizes the complexes between CDH1 (E-cadherin) and its interaction partners CTNNB1 (beta-catenin), CTNND1 and JUP (gamma-catenin) (PubMed:11226248). Under conditions of apoptosis or calcium influx, cleaves CDH1 (PubMed:11953314). This promotes the disassembly of the complexes between CDH1 and CTNND1, JUP and CTNNB1, increases the pool of cytoplasmic CTNNB1, and thereby negatively regulates Wnt signaling (PubMed:11226248). Required for normal embryonic brain and skeleton development, and for normal angiogenesis (PubMed:9160754, PubMed:10421573, PubMed:12834865). Mediates the proteolytic cleavage of EphB2/CTF1 into EphB2/CTF2 (PubMed:17428795). The holoprotein functions as a calcium-leak channel that allows the passive movement of calcium from endoplasmic reticulum to cytosol and is involved in calcium homeostasis (PubMed:16959576). Involved in the regulation of neurite outgrowth (By similarity). Is a regulator of presynaptic facilitation, spike transmission and synaptic vesicles replenishment in a process that depends on gamma-secretase activity. It acts through the control of SYT7 presynaptic expression (PubMed:30429473).[UniProtKB/Swiss-Prot Function]