

Product datasheet for MC227237

Homer1 (NM_001284189) Mouse Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Homer1 (NM_001284189) Mouse Untagged Clone
Tag: Tag Free
Symbol: Homer1
Synonyms: homer-1; PSD-Zip45; SYN47; Ves-1; vesl-1
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
Fully Sequenced ORF: >MC227237 representing NM_001284189
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCGCGATCGCC

ATGGGGGAGCAACCTATCTTCAGCACTCGAGCTCATGTCTTCCAGATTGACCCGAACACAAAGAAGAACT
 GGGTACCCACCAGCAAGCATGCAGTTACTGTATCTTATTTTTATGACAGCACAAGAAATGTGTATAGGAT
 AATCAGTTTAGATGGCTCAAAGGCAATAATAAATAGCACCATCACACCAACATGACATTTACTAAAACA
 TCTCAAAAGTTTGGCCAATGGGCTGATAGCCGGGCAAACACTGTTTATGGACTGGGATTCTCCTCTGAGC
 ATCATCTTTCAAAATTCGCAGAAAAGTTTCAGGAATTTAAGGAAGCTGCTCGGCTTGCAAAGGAGAAGTC
 GCAGGAGAAGATGGAGCTGACCACTACCCCTTCACAGGAATCAGCAGGAGGAGATCTTCAGTCTCCTTTG
 ACACCAGAAAGTATCAATGGGACAGACGATGAGAGAACACCCGATGTGACACAGAAGTCTGAGCCAAAGG
 CTGAGCCAACCTCAGAAATGCATTGCCATTTCCACATAGTTCAGCAATCAGCAAACACTGGGAGGCTGAGCT
 AGCTACCCTCAAAGGCAACAATGCCAACTCACTGCAGCCCTGCTGGAGTCCACTGCCAATGTGAAGCAG
 TGAAGCAACAGCTTGTGCGTACCAGGAGGAAGCAGAGCGGCTGCACAAGCGGGTCACTGAGCTGGAGT
 GTGTTAGTAGTCAAGCAAACGCTGTGCACAGCCACAAGACAGAGCTGAACCAGACAGTGCAGGAAGTGA
 AGAGACCCTGAAAGTAAAGGAAGAGGAAATAGAAAGATTAAAACAAGAAATCGATAATGCCAGAGAACTC
 CAAGAACAGAGGGACTCTTTGACTCAGAAACTACAGGAAGTTGAAATTCGAAATAAAGACCTGGAGGGC
 AGCTGTCTGACCTAGAACAGCGCTGGAGAAGAGCCAGAACAAGAGGCTTTCCGCAGTAACTGAA
 GACTCTAGAAATCTGGATGGAAAAATATTTGAACTAACAGAATTACGAGATAATTTGGCCAAGCTA
 CTGGAATGCAGCTAA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAAGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_001284189



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Insert Size:	1065 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_001284189.1, NP_001271118.1</u>
RefSeq Size:	4768 bp
RefSeq ORF:	1065 bp
Locus ID:	26556
UniProt ID:	<u>Q9Z2Y3</u>
Cytogenetics:	13 C3

Gene Summary:

Postsynaptic density scaffolding protein. Binds and cross-links cytoplasmic regions of GRM1, GRM5, ITPR1, DNM3, RYR1, RYR2, SHANK1 and SHANK3. By physically linking GRM1 and GRM5 with ER-associated ITPR1 receptors, it aids the coupling of surface receptors to intracellular calcium release. May also couple GRM1 to PI3 kinase through its interaction with AGAP2. Isoform 1 regulates the trafficking and surface expression of GRM5. Differentially regulates the functions of the calcium activated channel ryanodine receptors RYR1 and RYR2. Isoform 1 decreases the activity of RYR2, and increases the activity of RYR1, whereas isoform 5 counteracts the effects by competing for binding sites. Isoform 3 regulates the trafficking and surface expression of GRM5. Isoform 5 acts as a natural dominant negative, in dynamic competition with constitutively expressed isoform 1, isoform 2 and isoform 3 to regulate synaptic metabotropic glutamate function. Isoform 5, may be involved in the structural changes that occur at synapses during long-lasting neuronal plasticity and development (By similarity). Forms a high-order complex with SHANK1, which in turn is necessary for the structural and functional integrity of dendritic spines (By similarity). Negatively regulates T cell activation by inhibiting the calcineurin-NFAT pathway. Acts by competing with calcineurin/PPP3CA for NFAT protein binding, hence preventing NFAT activation by PPP3CA (By similarity).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (b, also known as homer-1b) lacks an alternate in-frame exon in the central coding region, compared to variant L. The encoded isoform (b) is shorter than isoform L. 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.