

Product datasheet for **MC204803**

Homer1 (NM_011982) Mouse Untagged Clone

Product data:

| | |
|---------------------------|--|
| Product Type: | Expression Plasmids |
| Product Name: | Homer1 (NM_011982) Mouse Untagged Clone |
| Tag: | Tag Free |
| Symbol: | Homer1 |
| Synonyms: | homer-1; PSD-Zip45; SYN47; Ves-1; vesl-1 |
| Mammalian Cell Selection: | Neomycin |
| Vector: | PCMV6-Kan/Neo (PCMV6KN) |
| E. coli Selection: | Kanamycin (25 ug/mL) |



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Fully Sequenced ORF: >BC064041
 CTCTGCTCCGAGTCTTAGGAGGACGAACATTCAAAGGACAGATTC AATGTGGTGTGCCGTGCACATCGG
 GAGCGGCTGGGGTTTGCACCTTCGAGATTTCTTCTATATAATTTTTTTTTTAAACGTAAGGGAGGCAGTA
 GCATTGCTGCCTGTAGGATTTTTATTCAAGTGCACGTCGCGTTGGGTTGCACGCTCCACCCCGGGACC
 TGGTGTGGTGAATTTGAACCCACCGCCTTAGCCAAAAAGGCCGAGTAACCTGGCTGCCTGAGTGTCTG
 GGAAGACGTGAGCGAAATGACCAGCGAACTCATTTTTATCAGACTTGCTGAAGCTGGCTTTTGCCTTTT
 TTCTACACGTACGCTTAATTTTTGTGGAATAGTTAAGTCTATATTCTCCGCGCAACCTTTCAAATTC
 AATGTTTTGAACATTTTTGGTGTGACGCGAGTGAATCATTTTTACGACAAGAACTAACTGAATTGTCTGC
 CTTGTTGAGTTGCCTCCGAAAAAGATCTCGGGGTGAAAAAGCAACTGCAAAATAACAGACGGAGAAAAAT
 TCCTTGGAAGTTATTTCTGTAGCATAAGAGCAGAACTTCAGAGCAAGTTTTTATTGGGCAAAATGGGGG
 AGCAACCTATCTTCAGCACTCGAGCTCATGTCTCCAGATTGACCCGAACACAAAGAAGAACTGGGTACC
 CACCAGCAAGCATGCAGTTACTGTATCTTATTTTTATGACAGCACAAGAAATGTGTATAGGATAATCAGT
 TTAGATGGCTCAAAGGCAATAATAATAGCACCATCACACCAAACATGACATTTACTAAAACATCTCAA
 AGTTTGGCCAATGGGCTGATAGCCGGGCAAACTGTTTATGGACTGGGATTCTCCTCTGAGCATCATCT
 TCAAATTCGCAGAAAAGTTTTCAGGAATTAAGGAAGCTGCTCGCTTGCAAAGGAGAAGTCGCAGGAG
 AAGATGGAGCTGACCAGTACCCCTTCACAGGAATCAGCAGGAGGAGATCTTCAGTCTCCTTTGACACCAG
 AAAGTATCAATGGGACAGACGATGAGAGAACACCCGATGTGACACAGAACTCAGAGCCAAGGGCTGAGCC
 AACTCAGAATGCATTGCCATTTCCACATAGGTACACATTC AATTCAGCAATCATGATTAAGTAAGGTGGA
 TAAATATGGAAGTTCAATTTGGTTTCAGAACTCTTGAAGTTACAACCTTTGAGTGAAAAATCTCAGGTCA
 GACTCCTTTAATTTATTGTTCTTGGTTGCTCAAGTTGACTGAATTACTATATTTCCATTATCTATGTGGA
 AAAAGGAGCATTGAGCTAATTATAGGAGAAATTTTTAAATGGAGAAAAATAATTCCTTTCTATCTATA
 TTTTAAAGATCCCTTTTGAACCCGTTTTCTGTTTTTATATGTTATGTAAGATTTATAATGTGTAAT
 TAGAAACATAGAATTTCTACTGAAGGAAAGCTTTACCACAGGCCTACAGAGTTTTCACAGAAGACAGG
 GTACCAAGCACGAGCCTGTTAGCATTGATGGCAGATGCCAGCAGAAGGAAGGCTTGACTTCTAATTCTG
 TATTCTAAAAGATACATCATGTTCTAAATGCATTTCAAACATTAGTTATTGGCCGTACCGTGGCATTACT
 GGACTGTAACATGAATGTGAAATGGCACTATTGAAAATATTTTTTAAAGCCCTCTACCTTAACACTA
 ATTTTTACCCTTATTTAAATGCTTTTTACTAAATAGTTTTAGGTAATAAGAAAATAGGGTTTTTTG
 ACTGCACATTTTTTGAAGAACCAAGTTTTAGAAAATTATTTCTTTGACAGATTAATAATTGCAAAAGT
 AGATATTTCAAAAAAAAAAAAAAAAAAAAAA

Restriction Sites: EcoRI-NotI

ACCN: NM_011982

Insert Size: 561 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).

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: [BC064041](#), [AAH64041](#)

RefSeq Size: 1922 bp

RefSeq ORF: 561 bp

Locus ID: 26556

UniProt ID: [Q9Z2Y3](#)

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 (S, also known as homer-1a or Vesl-1S) lacks several 3' exons but contains a 3' terminal exon that extends past a splice site that is used in variant L, resulting in a novel 3' coding region and 3' UTR, compared to variant L. The encoded isoform (S) has a shorter and distinct C-terminus, compared to isoform L.