

Product datasheet for **MG218531**

Homer2 (NM_001164087) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Homer2 (NM_001164087) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Homer2
Synonyms:	9330120H11Rik; AW539445; CPD; Vesl-2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG218531 representing NM_001164087 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGACTTTCACAAAACGTACAGAAAGTTCGGGCAGTGGGCTGACAGCAGAGCCAACACCGTGTTTCGGTT
TGGGATTCTCCTCCGAGCTGCAGCTCACGAAGTTTGCAGAGAAGTTCCAGGAGGTAAGAGAAGCTGCCAG
GCTAGCCAGAGACAAGTCCCAGGAGAAAACCGAGACCTCCAGCAATCATTCCAAGAATCTGGGTGTGAA
ACCCCGTCTTCCACTCAGGCATCCAGCGTCAATGGCACAGACGACGAAAAGGCCCTCACGCGAGCCCGAG
CCGACACTCACCTCAAGTCTGAGAATGACAAGCTGAAGATCGCGCTGACACAGAGTCTGCAATGTGAA
GAAGTGGGAGATGGAGCTGCAGACCTGCGGGAGAGCAACGCCCGGCTGACCACGGCACTGCAGGAGTCCG
GCGGCCAGCGTGGAGCAGTGAAGCGGCAGTCTCCATCTGCAGGGACGAGAATGACAGGCTCCGCAGCA
AGATCGAGGAGCTGGAAGAACAGTGCAGCGAGATAAACAGGGAGAAGGAGAAGAACAACAGCTGAAGAG
GAGGATCGAGGAGCTGGAGTCCGAGCAAGGAGATGGAGTTGAAAGATCTCCGAAAACAGAGT
GAAATCATACCTCAGCTCATGTCCGAGTGTGAATATGTCTCTGAGAAGTTAGAGGCGGCCGAAAGAGACA
ATCAAACCTTGAAGACAAAGTGCAGTCTCTAAAGACAGACATCGAGGAGAGTAAATACCGACAGCGCCA
CCTGAAGGGGAGCTGAAGAGCTTCTTGAGTGCTGGATGGAAGATCGACGACCTCCATGACTTCCGT
AGAGGACTCTCAAGTTAGGCACAGATAAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >MG218531 representing NM_001164087
 Red=Cloning site Green=Tags(s)

MTFTKTSQKFGQWADSRANTVFGLGFSSSELQLTKFAEKFQEVREAAARLARDKSQEKTTETSSNHSQESGCE
 TPSSTQASSVNGTDDEKASHASPADTHLSENDLKIATQSAANVKKWEMELQTLRESNARLTALQES
 AASVEQWKRFQFICRDENDRLRSKIEELEEQCSEINREKEKNTQLKRRIEELSEVRDKEMELKDLRKQS
 EIIPQLMSECEYVSEKLEAAERDNQNLQLEDKVRSKLTIDIEESKYRQRHLKGELKSFLEVLGKIDDLHDFR
 RGLSKLGTDN

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001164087

ORF Size: 870 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_001164087.1](#), [NP_001157559.1](#)

RefSeq Size: 10982 bp

RefSeq ORF: 873 bp

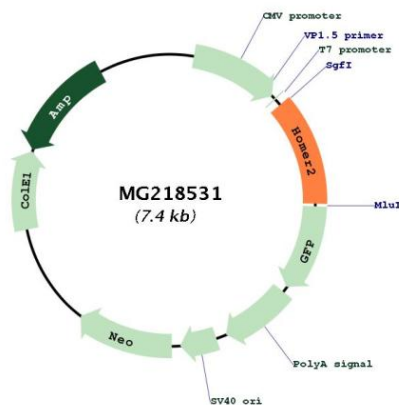
Locus ID: 26557

UniProt ID: [Q9QWW1](#)

Cytogenetics: 7 D3

Gene Summary: Postsynaptic density scaffolding protein. Binds and cross-links cytoplasmic regions of GRM1, GRM5, ITPR1, DNMT3, 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 (By similarity). Isoforms can be differently regulated and may play an important role in maintaining the plasticity at glutamatergic synapses (By similarity) Required for normal hearing (PubMed:25816005). 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]

Product images:



Circular map for MG218531