

Product datasheet for **MG227303**

Gabra1 (NM_010250) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Gabra1 (NM_010250) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Gabra1
Synonyms:	GABAA-alpha1; GABAAR-alpha1; Gabra-1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG227303 representing NM_010250
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGAAGAAAAGTCGGGGTCTCTCTGACTATCTTTGGCCTGGACCCTCATTCTGAGCACACTGTCGGGAA
 GAAGCTATGGACAGCCCTCCAAGATGAACTTAAAGACAACCACTGTCTTACAGAATTTTGGACCG
 ACTGCTGGACGGTTATGACAATCGTCTGAGACCAGGTTTGGGAGAGCGTGAAGTGAAGACCGAC
 ATTTTCGTACCAGTTTCGGACCAGTTTCAGACCACGATATGGAGTATACAATAGATGTGTTTTCCGTC
 AAAGTTGGAAGGATGAAAGATTAATCAAAAGGACCCATGACAGTGTCCGGCTAAACAACCTTATGGC
 CAGTAAAATCTGGACTCCAGATACATTTTCCACAATGGAAGAAGTCTGTGGCCACAACATGACCATG
 CCTAATAAGCTCCTGCGTATCACAGAGGATGGCACTCTGCTGTACACCATGAGGTTGACCGTGAGAGCTG
 AATGCCAATGCACTTGAAGACTTCCCTATGGATGCCCATGCCCTGCCACTAAAATTCGGAAGCTATGC
 TTATACAAGAGCAGAAGTTGTCTATGAGTGGACCAGAGGCCAGCCGTTCAAGTGTGTAGCAGAAGAT
 GGGTCACGTTTAAACCAGTATGACCTTCTTGACAACAGTTGACTCTGGAATTGTTCAAGTCCAGTACTG
 GAGAATATGTGGTTATGACGACTCACTTCCACTTGAAGAGAAAAATTGGCTACTTTGTTATTCAAACATA
 TCTGCCGTGCATAATGACAGTTATTCTCTCCCAAGTCTCCTTCTGGCTCAACAGAGAGTCAGTACCAGCA
 AGAACTGTCTTTGGAGTGACGACTGTTCTGACTATGACAACCTTGAAGTATCAGTCCAGAAAATCCCTCC
 CGAAGGTGGCTTATGCAACAGCTATGGACTGGTTTATTGCAATGCTATGCCTTTGTTTCTCAGCTCT
 GATTGAGTTTCCACAGTAACTATTTACCAAGAGAGGGTATGCGTGGGATGGCAAAAGCGTGGTTCCA
 GAAAAGCCAAAGAAAGTAAAGGATCCTCTCATTAAAGAAAAACAACACATATGCTCCTACAGCAACAGCT
 ATACCCCTAACTTAGCCAGGGTGACCCCGCTTGCAACTATTGCTAAAAGTGGCAACATAGAACCAGAA
 AGAAGTCAAGCCTGAGACAAAACCACGAAACCAAGAAAACCTTAAACAGCGTCAAGAAAATCGACCGA
 CTGTCAAGAATAGCCTTTCCGCTGCTATTTGGAATCTTAACTTAGTCTATTGGGCCACGTATTTAAACA
 GAGAGCCTCAGCTAAAAGCCCCACACCCCATCAA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG227303 representing NM_010250
 Red=Cloning site Green=Tags(s)

MKKSRLSDYLWAWTLILSTLSGRSYGQPSQDELKDNTTFVTRILDRLLDGYDNRLRPGLGERVTEVKTD
 IFVTSFGPVSDHMEYIDVFFRQSWKDERLKFKGPMVLRNLLMASKIWPDTFFHNGKKSVAHNMTM
 PNKLLRITEDGTLTYMRLTVRAECPMHLEDFPMDAHACPLKFGSYAYTRAEVVYEWTRPARSVVAED
 GSRLNQYDLLGQTVDSGIVQSSTGEYVVMTHFHLKRRKIGYFVIQTYLPCIMTVILSQVSWLNRRESVPA
 RTVFGVTTVLTMTTLLSISARNSLPKVAYATAMDWFIACVYAFVFSALIEFATVNYFTKRGYAWDGSVVP
 EKPVKVDPLIKKNNTYAPTATSYPNLARGDPLATIAKSATIEPKVKPETKPPKTFNSVSKIDR
 LSRIAFPLLFGIFNLVYATYLNREPQLKAPTPHQ

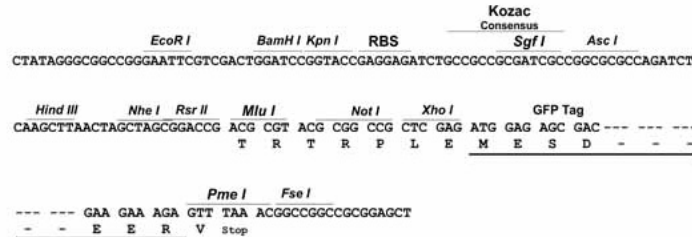
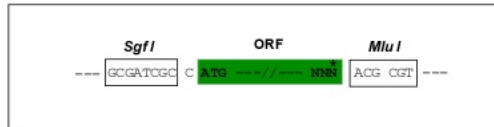
TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:


ACCN: NM_010250

ORF Size: 1365 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.

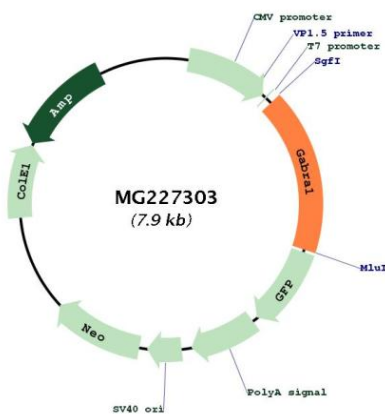
RefSeq: [NM_010250.5](#), [NP_034380.1](#)
RefSeq ORF: 1368 bp

Locus ID: 14394

UniProt ID: [P62812](#)
Cytogenetics: 11 24.97 cM

Gene Summary:

Ligand-gated chloride channel which is a component of the heteropentameric receptor for GABA, the major inhibitory neurotransmitter in the brain (PubMed:27129275). Plays an important role in the formation of functional inhibitory GABAergic synapses in addition to mediating synaptic inhibition as a GABA-gated ion channel (PubMed:27129275). The gamma2 subunit is necessary but not sufficient for a rapid formation of active synaptic contacts and the synaptogenic effect of this subunit is influenced by the type of alpha and beta subunits present in the receptor pentamer (PubMed:27129275). The alpha1/beta2/gamma2 receptor and the alpha1/beta3/gamma2 receptor exhibit synaptogenic activity (PubMed:27129275). GABRA1-mediated plasticity in the orbitofrontal cortex regulates context-dependent action selection (PubMed:25348603). Functions also as histamine receptor and mediates cellular responses to histamine (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:


Circular map for MG227303