OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for MG210487

Large1 (NM_010687) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Large1 (NM_010687) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Large1
Synonyms:	BPFD#36; enr; fg; froggy; Gyltl1a; Large; Mbp-1; Mbp1; myd
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

View online »

ORF Nucleotide Sequence:

>MG210487 representing NM_010687
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCTGGGAATCTGCAGAGGGAGAAGGAAATTCCTGGCTGCCTCTTTGACTCTACTCTGCATACCAGCCA
TCACCTGGATTTACTTGTTTGCTGGGAGCTTTGAAGATGGGAAACCTGTGTCTCTGTCTCCCCTGGAGTC
CCAAGCCCACAGTCCCCGGTACACAGCCTCCAGCCAACGGGAGCGGGAGAGCCTGGAAGTGCGTGTTCGA
GAAGTTGAGGAGGAAAACCGTGCTCTGCGCAGGCAGCTCAGCCTGGCCCAGGGTCAGAGCCCTGCTCACC
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CATTGTGGCAGGTAACAGCTCTGAGTGTGGGCAGCAGCCAGCTGTGGAAAAGTGTGAGACCATCCATGTG
GCCATCGTCTGTGCCGGATACAATGCCAGCAGGGACGTTGTCACCCTGGTGAAATCTGTCCTCTTTCATA
GGCGGAACCCTCTGCACTTCCACCTCATTGCTGATTCTATTGCTGAGCAGATCCTGGCTACACTCTTCCA
GACCTGGATGGTACCTGCAGTGCGAGTAGACTTCTATAATGCTGATGAGCTCAAGTCTGAAGTGTCCTGG
ATTCCCAACAAACATTACTCTGGAATTTATGGCCTGATGAAGCTGGTTCTGACCAAAACTCTGCCTGCCA
ACCTGGAGAGAGTCATTGTCCTAGACACCGACATCACCTTTGCAACAGACATTGCAGAGCTGTGGGCCGT
GTTCCATAAGTTCAAAGGGCAACAGGTCCTGGGCTCGGTAGAGAACCAGAGTGACTGGTATCTTGGAAAT
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TTCTGCTGACAACACAGACGTTACCCTTGTTGCTCAGCTCTCCATGGACAGACTACAGATGCTGGAGGCC
ATCTGTAAACACTGGGAGGGACCCATCAGCCTGGCCCTCTACCTGTCAGATGCAGAAGCCCAGCAGTTCC
TCCGCTATGCCCAGGGATCCGAGGTGCTCATGAGCCGGCAGAACGTGGGCTACCACATCGTGTACAAGGA
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CAAGTCAAAAGCAGAGCTGCTGTCAATGTTGGACATGGGGACCCTATTCACATTCAGGTATCACGTATGG
ACTAAAGGCCATGCACCCACAAACTTTGCCAAGTGGCGGACTGCCACCACACCTTACCAGGTTGAGTGGG
AGGCTGATTTTGAGCCATATGTTGTTGTGAGACGAGACTGCCCTGAGTATGATCGGAGATTTGTGGGCTT
TGGCTGGAACAAAGTGGCTCACATCATGGAATTGGATGCACAGGAGTATGAGTTCACCGTGTTGCCCAAT
GCCTACATGATCCACATGCCCCATGCCCCTAGTTTCGACATCACTAAGTTCCGTTCCAACAAGCAATACC
GCATCTGTCTCAAAACCCTGAAGGAAGAGTTTCAACAAGACATGTCCCGACGATATGGCTTTGCTGCCTT
GGAATATCTCACAGCTGAGAACAACAGC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

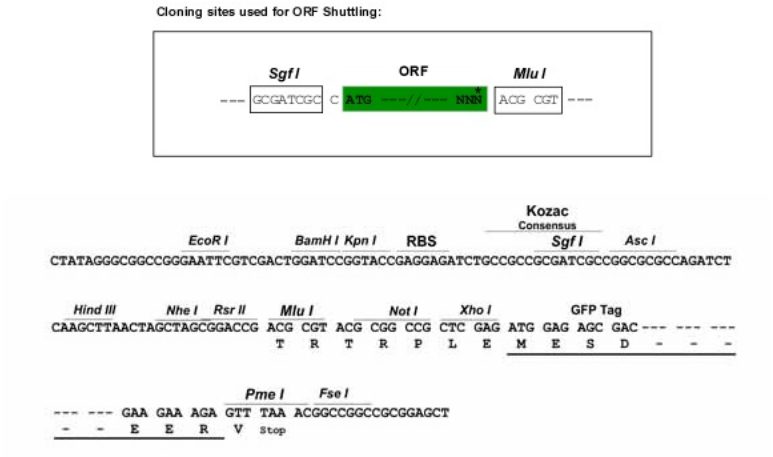
>MG210487 representing NM_010687
Red=Cloning site Green=Tags(s)

MLGICRGRRKFLAASLTLLCIPAITWIYLFAGSFEDGKPVSLSPLESQAHSPRYTASSQRERESLEVRVR
EVEEENRALRRQLSLAQGQSPAHHRGNHSKTYSMEEGTGDSENLRAGIVAGNSSECGQQPAVEKCETIHV
AIVCAGYNASRDVVTLVKSVLFHRRNPLHFHLIADSIAEQILATLFQTWMVPAVRVDFYNADELKSEVSW
IPNKHYSGIYGLMKLVLTKTLPANLERVIVLDTDITFATDIAELWAVFHKFKGQQVLGSVENQSDWYLGN
LWKNHRPWPALGRGYNTGVILLLLDKLRKMKWEQMWRLTAEREHMGMLSTSLADQDIFNAVIKQNPFLVY
QLPCFWNVQLSDHTRSEQCYRDVSDLKVIHWNSPKKLRVKNKHVEFFRNLYLTFLEYDGNLLRRELFGCP
SETDVNNENLQKQLSELDEDNLCYEFRRERFTVHRTHLYFLHYEFEPSADNTDVTLVAQLSMDRLQMLEA
ICKHWEGPISLALYLSDAEAQQFLRYAQGSEVLMSRQNVGYHIVYKEGQFYPVNLLRNVAMKHISTPYMF
LSDIDFLPMYGLYEYLRKSVIQLDLANTKKAMIVPAFETLRYRLSFPKSKAELLSMLDMGTLFTFRYHVW
TKGHAPTNFAKWRTATTPYQVEWEADFEPYVVVRRDCPEYDRRFVGFGWNKVAHIMELDAQEYEFTVLPN
AYMIHMPHAPSFDITKFRSNKQYRICLKTLKEEFQQDMSRRYGFAALEYLTAENNS

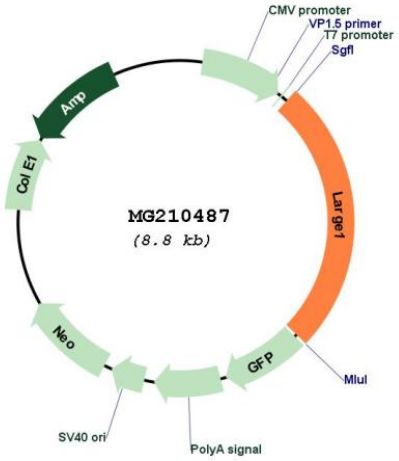
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:	NM_010687
ORF Size:	2268 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_010687.1, NP_034817.1
RefSeq Size:	3669 bp
RefSeq ORF:	2271 bp
Locus ID:	16795

UniProt ID:	Q9Z1M7
Cytogenetics:	8 35.08 cM
Gene Summary:	Bifunctional glycosyltransferase with both xylosyltransferase and beta-1,3-glucuronyltransferase activities involved in the biosynthesis of the phosphorylated O-mannosyl trisaccharide (N-acetylgalactosamine-beta-3-N-acetylglucosamine-beta-4-(phosphate-6-)mannose), a carbohydrate structure present in alpha-dystroglycan (DAG1) (PubMed:23125099, PubMed:23135544). Phosphorylated O-mannosyl trisaccharid is required for binding laminin G-like domain-containing extracellular proteins with high affinity and plays a key role in skeletal muscle function and regeneration (PubMed:15184894, PubMed:24132234). LARGE elongates the glucuronyl-beta-1,4-xylose-beta disaccharide primer structure initiated by B3GNT1/B4GAT1 by adding repeating units [-3-Xylose-alpha-1,3-GlcA-beta-1-] to produce a heteropolysaccharide (By similarity).[UniProtKB/Swiss-Prot Function]