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 MG215346

Mreg (NM_001005423) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Tag:	TurboGFP
Symbol:	Mreg
Synonyms:	dsu; Gm974; Wdt2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

>MG215346 representing NM_001005423
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGGGCTGCGCCGCTGGCTACGGAGCGCCTGCTGCTGCTGCCCGTGCCGGTGCCTGGAGGAGCCCGCGC
GGCCCGAGAAGGAGCCGCTGGTCAGTGGTAACAATCCGTATTCCTCCTTTGGAGCGACTCTGGAGAGGGA
TGATGAGAAGAATTTATGGAGCATGCCTCATGACGTGTCCCACACAGAGGCGGATGACGATAGGATCTTG
TATAATTTGATAGTCATTCGTAATCAGCAGACCAAAGACTCAGAGGAATGGCAAAGACTCAACTATGATA
TCTACACCCTGCGGCAGATCCGCAGGGAAGTGAGGAACCGATGGAGACGAATCTTAGAGGACTTGGGCTT
TCAAAGGGAAGCCGACTCTCTGTTGTCAGTGACCAAACTCAGCACCATGAGTGATTCTAAAAACACAAGG
AAAGCCCGGGAGATGCTGTTAAAGCTGGCTGAAGAGACCTCTATCTTCCCCGCCAGCTGGGAGCTCTCCG
AGAGGTACCTCTTGGTTGTGGACCGGCTCATTGCTCTCGATGCTGCTGAGGACTTCTTTAAGATTGCTAG
CCAAATGTACCCCAAGAAACCTGGGGTCCCATGCCTGGTGGACGGCCAGAGAAAACTGCACTGCCTTCCA
TTTCCAAGCCCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG215346 representing NM_001005423
Red=Cloning site Green=Tags(s)

MGLRRWLRSACCCPCRCLEEPARPEKEPLVSGNNPYSSFGATLERDDEKNLWSMPHDVSHTEADDDRIL
YNLIVIRNQQTKDSEEWQRLNYDIYTLRQIRREVRNRWRRILEDLGFQREADSLLSVTKLSTMSDSKNTR
KAREMLLKLAEETSIFPASWELSERYLLVVDRLIALDAAEDFFKIASQMYPKKPGVPCLVDGQRKLHCLP
FPSP

TRTRPLE - GFP Tag - V

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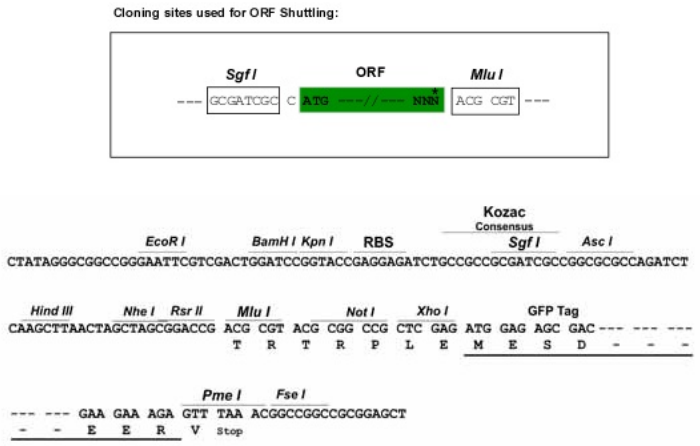
Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001005423

ORF Size: 642 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).

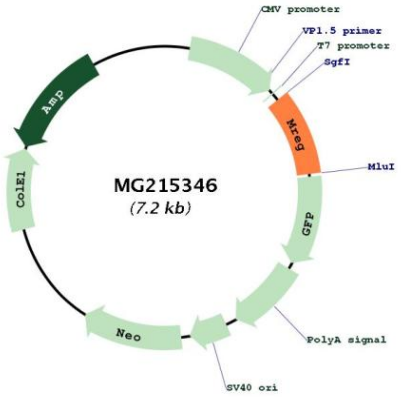
Reconstitution Method:
1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: NM_001005423.2, NP_001005423.1

RefSeq Size:	2493 bp
RefSeq ORF:	645 bp
Locus ID:	381269
UniProt ID:	Q6NVG5
Cytogenetics:	1 C3
Gene Summary:	Probably functions as cargo-recognition protein that couples cytoplasmic vesicles to the transport machinery (PubMed:22940130, PubMed:22275436, PubMed:30174147). Plays a role in hair pigmentation, a process that involves shedding of melanosome-containing vesicles from melanocytes, followed by phagocytosis of the melanosome-containing vesicles by keratinocytes (PubMed:15550542, PubMed:3410303, PubMed:22753477). Functions on melanosomes as receptor for RILP and the complex formed by RILP and DCTN1, and thereby contributes to retrograde melanosome transport from the cell periphery to the center (PubMed:22940130, PubMed:22275436). Overexpression causes accumulation of late endosomes and/or lysosomes at the microtubule organising center (MTOC) at the center of the cell (PubMed:19240024, PubMed:30174147). Probably binds cholesterol and requires the presence of cholesterol in membranes to function in microtubule-mediated retrograde organelle transport (PubMed:30174147). Binds phosphatidylinositol 3-phosphate, phosphatidylinositol 4-phosphate, phosphatidylinositol 5-phosphate and phosphatidylinositol 3,5-bisphosphate, but not phosphatidylinositol 3,4-bisphosphate or phosphatidylinositol 4,5-bisphosphate (PubMed:19240024). Required for normal phagosome clearing and normal activation of lysosomal enzymes in lysosomes from retinal pigment epithelium cells (PubMed:19240024). Required for normal degradation of the lipofuscin component N-retinylidene-N-retinylethanolamine (A2E) in the eye (PubMed:19240024). May function in membrane fusion and regulate the biogenesis of disk membranes of photoreceptor rod cells (Probable).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG215346