

## Product datasheet for **RG230565**

### Alpha Dystroglycan (DAG1) (NM\_001177636) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Alpha Dystroglycan (DAG1) (NM_001177636) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	DAG1
Synonyms:	156DAG; A3a; AGRNR; DAG; LGMDR16; MDDGA9; MDDGC7; MDDGC9
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG230565 representing NM\_001177636  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAGGATGTCTGTGGGCTCTCGCTGCTGCTGCCCTCTGGGGAGGACCTTTCTCCTCTGCTCTCTG  
 TGGTTATGGCTCAGTCCCACTGGCCAGTGAACCTCAGAGGCTGTCAGGGACTGGGAAAACAGCTTGA  
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 TCAAGGTATCAGCGGCAGGGAAGGAGGCTTTGCCATCTTGGTGCCTGGGACTCACAGACCCACACCTT  
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 CCTGAAACTGCGGAGCAGCAGCTGGTGGGCGAGAAGTCTGGTACAGTTCAACAGCAACAGCCAGCTC  
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 GTCACCTCCTCCATGTCCACCT

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:** >RG230565 representing NM\_001177636  
 Red=Cloning site Green=Tags(s)

MRMSVGLSLLLPLWGRTFLLLLSVVMAQSHWPSEPSEAVRDWENQLEASMHSVLSDLHEAVPTVVGIPDG  
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 LHRMRSFSEVELHNMKLVVNVNRLFDMSAFMAGPGNAKKVVENGALLSWKLGCSLNQNSVPDIHGVEAP  
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 GEPNQRPDLKNHIDRVDAWVGTYFEVKIPSDTFYDHEDTTDKLKLTLKLREQQLVGEKSWVQFNSNSQL  
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 KKLAFAGDRNCSTITLQNTIRGSI VVEWTNNTLPLEPCPKQIAGLSRRIAEDDGKPRPAFNALEPDF  
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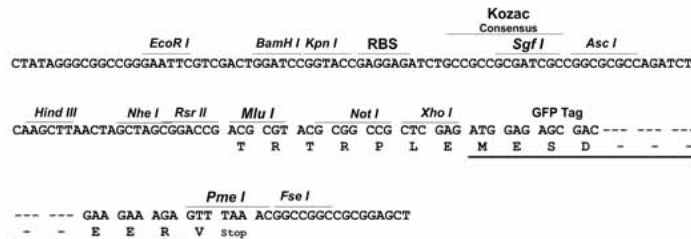
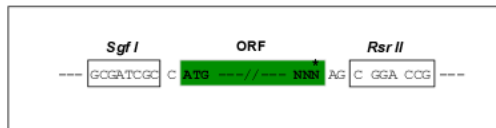
SGPTRRRLE - GFP Tag - V

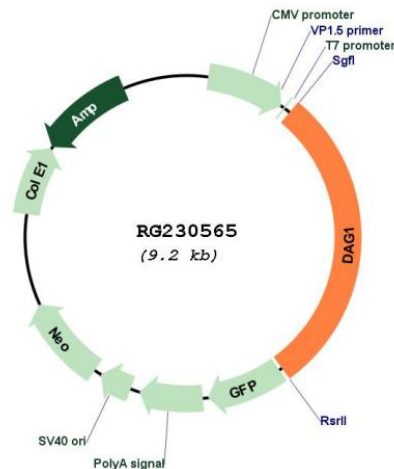
**Restriction Sites:**

SgfI-RsrII

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



**Plasmid Map:**


**ACCN:** NM\_001177636

**ORF Size:** 2685 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\\_001177636.2](#), [NP\\_001171107.1](#)

**RefSeq Size:** 5825 bp

**RefSeq ORF:** 2688 bp

**Locus ID:** 1605

**UniProt ID:** [Q14118](#)

**Cytogenetics:** 3p21.31

<b>Protein Families:</b>	Druggable Genome, Secreted Protein, Transmembrane
<b>Protein Pathways:</b>	Arrhythmogenic right ventricular cardiomyopathy (ARVC), Dilated cardiomyopathy, ECM-receptor interaction, Hypertrophic cardiomyopathy (HCM), Viral myocarditis
<b>Gene Summary:</b>	This gene encodes dystroglycan, a central component of dystrophin-glycoprotein complex that links the extracellular matrix and the cytoskeleton in the skeletal muscle. The encoded preproprotein undergoes O- and N-glycosylation, and proteolytic processing to generate alpha and beta subunits. Certain mutations in this gene are known to cause distinct forms of muscular dystrophy. Alternative splicing results in multiple transcript variants, all encoding the same protein. [provided by RefSeq, Nov 2015]