

Product datasheet for **RG230569**

Alpha Dystroglycan (DAG1) (NM_001177640) Human Tagged ORF Clone

Product data:

| | |
|---------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | Alpha Dystroglycan (DAG1) (NM_001177640) 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) |



[View online »](#)

ORF Nucleotide Sequence:

>RG230569 representing NM_001177640
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGAGGATGTCTGTGGGCTCTCGCTGCTGCTGCCCTCTGGGGAGGACCTTTCTCCTCTGCTCTCTG
 TGGTTATGGCTCAGTCCCACTGGCCAGTGAACCTCAGAGGCTGTCAGGGACTGGGAAAACCAGCTTGA
 GGCATCCATGCACTCAGTGCTCTCAGACCTCCACGAGGCTGTTCCACAGTGTTGGCATTCTGATGGC
 ACGGCTGTCTCGGGCGCTCATTTCGAGTGACCATTCCAACAGATTTGATTGCCTCCAGTGGAGATATCA
 TCAAGGTATCAGCGGCAGGAAGGAGGCTTTGCCATCTTGGTGCCTGGGACTCACAGACCCACACCTT
 GGAGGGCTCCCCCTTGACTGATAAGGGTGTGCATTACATTTTCAGTGAGCGCTACACGGCTGGGGCC
 AACGGGAGCCACATCCCCAGACCTCCAGTGTCTCCATCGAGGTCTACCCTGAAGACCACAGTGAGC
 TGCAGTCGGTGAGGACAGCTCCCCAGACCTGGTGAGGTGGTATCATCTGCCTGTGCTGCGGATGAACC
 TGTGACTGTTTTGACGGTATTTGGATGCCGACCTACCAAGATGACCCCAAAGCAAAGGATTGACCTC
 CTGCACAGGATGCGGAGCTTCTCAGAAGTAGAGCTTACAACATGAAATTAGTCCGGTGGTGAATAACA
 GACTATTTGACATGTCCGGCTTCATGGCTGGCCCGGAAATGCAAAAAGGTGGTGGAGAATGGGGCCCT
 TCTCTCTGGAAGCTGGGCTGCTCCCTGAACCAGAACAGTGTGCCTGACATTCATGGTGTAGAGGCCCT
 GCCAGGGAGGGCGCAATGTCTGCTCAGCTTGGCTACCCTGTGGTGGGTTGGCACATCGCCAATAAGAAGC
 CCCCTCTCCAAACCGCTCCGGAGGCAGATCCATGCTACACCCACACCTGTCACTGCCATTGGGCCCCC
 AACCACGGCTATCCAGGAGCCCCATCCAGGATCGTGCCAACCCACATCTCCAGCCATTGCTCCTCCA
 ACAGAGACCATGGCTCCTCCAGTCAGGGATCCTGTTCTGGGAAACCCACGGTACCATCCGGACCGAG
 GCGCCATTATTCAAACCCCAACCTAGGCCCATCCAGCCTACTCGGGTGCAGAAAGTGGCACCACAGT
 TCTTGGCCAGATTCGCCAACGATGACCAATTCCTGGCTATGTGGAGCCTACTGCAGTTGCTACCCCTCCC
 ACAACCACCAAGAAGCCACGAGTATCCACACAAAACAGCAACGCCTTCAACTGACTCCACCACCA
 CCACGACTCGCAGGCCAACCAAGAAACCACGGACACCCCGGCCAGTGCCTGGGTACCACCAAAGTTTC
 CATCACCAGATTGGAAACTGCCTCACCGCTACTCGTATTCGCACCACCACAGTGGAGTCCCCGTGGC
 GGAGAACCAACCAGCGCCAGAGCTCAAGAACCATATTGACAGGGTAGATGCCTGGGTTGGCACCTACT
 TTGAGGTGAAGATCCCGTCAGACACTTTCTATGACCATGAGGACACCACCTGACAAGCTGAAGCTGAC
 CCTGAAACTGCGGAGCAGCAGCTGGTGGGCGAGAAGTCTGGTACAGTTCAACAGCAACAGCCAGCTC
 ATGTATGGCTTCCCGACAGCAGCCACGTGGGCAACACGAGTATTTTCATGCATGCCACAGACAAGGGG
 GCCTGTGCGCTGTGGATGCCCTTCGAGATCCACGTCCACAGGCGCCCCAAGGGGATAGGGCTCCTGCAAG
 GTTCAAGGCCAAGTTTGTGGGTGACCCGGCACTGGTGTGAATGACATCCACAAGAAGATTGCCCTGGTA
 AAGAACTGGCCTTCGCCTTTGGAGACCGAAACTGTAGCACCATCACCTGCAGAATATCACCCGGGGCT
 CCATCGTGGTGGAAATGGACCAACAACACTGCCCTTGGAGCCCTGCCCAAGGAGCAGATCGCTGGGCT
 GAGCCCGCGGATCGCTGAGGATGATGAAAACTCGGCCCTGCCTTCTCCAACGCCCTAGAGCCTGACTTT
 AAGGCCACAAGCATCACTGTGACGGCTCTGGCAGTTGTGGCACCTACAGTTTATCCCTGTGGTACCAC
 CCAGGAGAGTGCCTCAGAGGCGCCGCCACAGAAGTGCCTGACAGGGACCCTGAGAAGAGCAGTGAGGA
 TGATGTCTACCTGCACACAGTCATTCCGGCCGTGGTGGTGCAGCCATCCTGCTCATTGCTGGCATCAT
 GCCATGATCTGCTACCGCAAGAAGCGGAAGGGCAAGCTTACCCTTGAGGACCAGGCCACCTTCATCAAGA
 AGGGGGTGCCTATCATCTTTGCAGACGAACTGGACGACTCCAAGCCCCACCCTCCTCCAGCATGCCACT
 CATTCTGCAGGAGGAGAAGGCTCCCTACCCCTCCTGAGTACCCCAACCAGAGTGTGCCGAGACCACT
 CCTCTGAACCAGGACACCATGGGAGAGTACACGCCCTGCGGGATGAGGATCCCAATGCGCTCCCTACC
 AGCCCCACCGCCCTTACAGCACCCATGGAGGGCAAGGGCTCCCGTCCAAGAACATGACCCCATACCG
 GTCACCTCCTCCATGTCCACCT

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTAA

Protein Sequence: >RG230569 representing NM_001177640
 Red=Cloning site Green=Tags(s)

MRMSVGLSLLLPLWGRTFLLLLSVVMAQSHWPSEPSEAVRDWENQLEASMHSVLSLHEAVPTVVGIPDG
 TAVVGRSFRVTIPTDLIASSGDIKVSAAAGKEALPSWLHWDSQSHTLEGLPLDQDKGVHYISVSATRLGA
 NGSHIPQTSVVFSEIEVYPEDHSELQSVRTASDPGGEVVSACAADPEVTLTVILDADLTKMTPKQRIDL
 LHRMRSFSEVELHNMKLVPVNNRFLDMSAFMAGPGNAKKVVENGALLSWKLGCSLNQNSVPDIHGVEAP
 AREGAMSAQLGYPVVGWHIANKKPLPKRVRRQIHATPTPVTAIGPPTTAIQEPPSRIVPTPTSPAIAPP
 TETMAPPVRDPVPGKPTVTIRTRGAIQPTLGP IQPTRVSEAGTTVPGQIRPTMTIPGYVEPTAVATPP
 TTTTKKPRVSTPKPATPSTDTSTTTTTRRPTKPRTPRPVPRVTTKVSITRLETASPPTRIRTTTSGVPRG
 GEPNQRPELKNHIDRVDAWVGTYFEVKIPSDTFYDHEDTTTDLKLTLLKREQLVGEKSWVQFNSNSQL
 MYGLPDSHVGKHEYFMHATDKGGLSAVDAFEIHVHRRPQDRAPARFKAKFVGD PALVLNDIHKKIALV
 KKLAFAGDRNCSTITLQNTIRGSI VVEWTNNTLPLEPCPKEQIAGLSRRIAEDDGKPRPAFNALEPDF
 KATSITVTGSGSCRHLQFIPVPPRRVPEAPTEVPDRDPEKSEDDVYLHTVIPAVVVAAILLIAGII
 AMICYRKKRKGKLTLEDQATFIKKGVP IIFADELDDSKPPPSSSMLILQEEKAPLPPPEYPNQSVPETT
 PLNQDTMGEYTPLRDEDPNAPPYQPPPPFTAPMEGKGSRPKNMTPYRSPPPYVPP

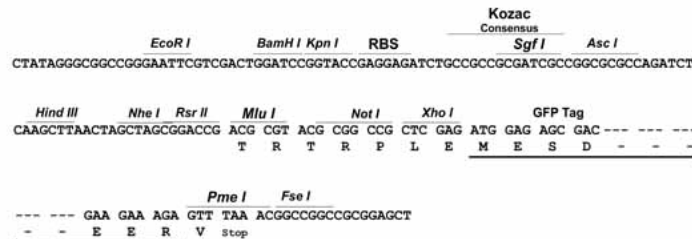
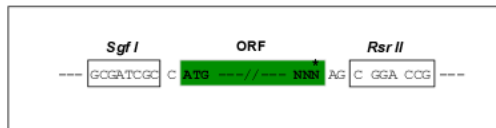
SGPTRRRLE - GFP Tag - V

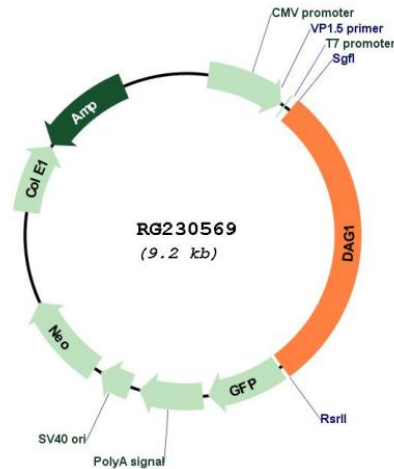
Restriction Sites:

SgfI-RsrII

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:


ACCN: NM_001177640

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_001177640.2](#), [NP_001171111.1](#)

RefSeq Size: 5600 bp

RefSeq ORF: 2688 bp

Locus ID: 1605

UniProt ID: [Q14118](#)

Cytogenetics: 3p21.31

| | |
|--------------------------|---|
| Protein Families: | Druggable Genome, Secreted Protein, Transmembrane |
| Protein Pathways: | Arrhythmogenic right ventricular cardiomyopathy (ARVC), Dilated cardiomyopathy, ECM-receptor interaction, Hypertrophic cardiomyopathy (HCM), Viral myocarditis |
| Gene Summary: | 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] |