

## Product datasheet for RC212294

### Desmoglein 2 (DSG2) (NM\_001943) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Desmoglein 2 (DSG2) (NM_001943) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Desmoglein 2
Synonyms:	CDHF5; HDGC
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC212294 representing NM_001943 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCGCGGAGCCCGGGACGCGCTACGCCCTGCTGCTTCTCCTGATCTGCTTTAACGTTGGAAGTGGAC  
TTCACCTACAGGTCTTAAGCACAAAGAAATGAAAATAAGCTGCTTCTAAACATCCTCATTAGTGC GGCA  
AAAGCGCGCTGGATCACCGCCCCGGTCTTCGGGAGGGAGAGGATCTGTCCAAGAAGAATCCAATT  
GCCAAGATACATTCTGATCTTGCAAGAAGAGGACTCAAATACTTACAAATACACTGGAAAAGGGA  
TTACAGAGCCACCTTTTGGTATATTTGTCTTTAACAAAGATACTGGAGAAGTGAATGTTACCAGCATTCT  
TGATCGAGAAGAAACACCATTTTTCTGCTAACAGGTTACGCTTTGGATGCAAGAGGAAACAATGTAGAG  
AAACCCCTAGAGCTACGCATTAAGGTTCTTGATATCAATGACAACGAACCAAGTGTTCACACAGGATGCT  
TTGTTGGGTCTGTTGAAGAGTTGAGTGCAGCACATACTCTTGATGAAAATCAATGCAACAGATGCAGA  
TGAGCCCAATACCTGAATTCGAAAATTCCTATAGAATCGTATCTCTGGAGCCTGCTTATCCTCCAGTG  
TTCTACCTAAATAAGATACAGGAGAGATTTATAACAACAGTGTACCTTGGACAGAGAGGAACACAGCA  
GCTACACTTTGACAGTAGAAGCAAGAGATGGCAATGGAGAAGTTACAGACAAACCTGTAACAAGCTCA  
AGTTACAGATTCGATTTTGGATGTCATGACAATACCTGTAGTAGAAAATAAAGTGTGAAGGGATG  
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ATAATTGGCTGGCAATTTTACATTTGCATCAGGAAATGAAGGAGGTTATTTCCACATAGAACAAGATGC  
TCAAATAACGAAGGAATTGTGACCCTTATTAAGGAAGTAGATTATGAAGAAAATGAAGAATCTTGACTTC  
AGTGTTATTGTCGCTAATAAAGCAGCTTTTACAAAGTCGATTAGGAGTAAATACAAGCCTACACCCATTC  
CCATCAAGGTCAAAGTGAAAAATGTGAAAGAAGGCATTCAATTTAAAAGCAGCGTCATCTCAATTTATGT  
TAGCGAGAGCATGGATAGATCAAGCAAAGGCCAAATAATTGAAAATTTCAAGCTTTTGATGAGGACACT  
GGACTACCAGCCATGCAAGATATGAAAATTAGAAGATAGAGATAATTGGATCTCTGTGGATTCTGTCA  
CATCTGAAATTAACCTTGCAAACTTCTGATTTTGAATCTAGATATGTTCAAAATGGCACATACACTGT  
AAAGATTGTGCCATATCAGAAGATTATCTAGAAAACCATCACTGGCAGAGTCTTATCAATGTTGAA



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GACATCAACGACAACTGTCCCACACTGATAGAGCCTGTGCAGACAATCTGTCACGATGCAGAGTATGTGA  
 ATGTTACTGCAGAGGACCTGGATGGACACCCAAACAGTGGCCCTTTCAGTTTCTCCGTCATTGACAAACC  
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 ACACAGCTTACATTCACCTCTGTGAGCAAACTATGGTTAATTCAGAGAATACCTACTCCTCTGGCAGTAG  
 CTTCCAGTTCCAAAATCTTTGCAAGAAGCCAATGCAGAGAAAGTAACTCAGGAAATAGTCACTGAAAGA  
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 GCCACAGAGCCTTATTGTGACAGAGAGGGTGTATGCTCCAGCTTCTACCTGGTAGATCAGCCTTATGCT  
 AATGAAGGTACAGTTGTGGTCACTGAAAGAGTAATACAGCCTCATGGGGTGGATCGAATCCTCTGGAAG  
 GCACTCAGCATCTCAAGATGTACCTTACGTGATGGTGAAGGAAAGAGAGAGCTTCTTCCCTCCAGCTC  
 AGGTGTGCAGCCTACTCTGGCCATGCCTAATATAGCAGTAGGACAGAAATGTGACAGTGACAGAAAGATT  
 CTAGCACCTGTTCCACTCTGCAATCCAGTTACCAGATTCCTACTGAAAATTCTATGACGCTAGGAACA  
 CCACGGTGTCTGGAGCTGGAGTCCCTGGCCCTCTGCCAGATTTTGGTTTAGAGGAATCTGGTCATTCTAA  
 TTCTACCATAACCACATCTTCCACCAGAGTTACCAAGCATAGCACTGTACAGCATTCTTACTCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC212294 representing NM\_001943  
 Red=Cloning site Green=Tags(s)

MARSPGRAYALLLLLICFNVGSLHLQVLSTRNENKLLPKHPLVRQKRAWITAPVALREGEDLSKKNPI  
 AKIHSDLAEERGLKITYKYTGKITEPPFGIFVFNKDTGELNVTSLDREETPFLLTGYALDARGNNVE  
 KPLELRKIVLDINDNEPVFTQDVFVGSVEELSAHTLVMKINATDAEPNTLNSKISYRIVSLEPAYPPV  
 FYLNKDTGEIYTTSVTLDREEHSSYTLTVEARDNGEVDKPKVQAQVQIRILDVNDNIPVVENKVLGEM  
 VEENQVNVETRIKVFDADEIGSDNWLANFTFASGNEGGYFHIEDAQTNEGIVTLIKEVDYEMKNLDF  
 SVIVANKAAFHKSIRSKEYKPTPIPIKVKVKNVKEGIHFKSSVISIYVSESMDRSSKGQIIGNFQAFDEDT  
 GLPAHARYVKLEDRDNWISVDSVTSEIKLAKLPDFESRYVQNGTYTVKIVAISEDYPRKTIITGTVLINVE  
 DINDNCPITLIEPVQTIChDAEYVNVTAEDLDGHPNSGPFVSVIDKPPGMAEKWKIARQESTSVLLQQSE  
 KKLGRSEIQFLISDNQGFSCPEKQVLTTLVCECLHGSGCREAQHDSYVGLGPAALMILAFLLLLVPL  
 LLLMCHCGKGAFTPIPGTIEMLHPWNEGAPPEDKVVPSFLPVDQGGSLVGRNGVGGMAKEATMKGSS  
 SASIVKQHEMSEMDGRWEEHRSLLSGRATQFTGATGAIMTTEITKTARATGASRDMAGAQAVALNEE  
 FLRNYFTDKAASYTEEDENHTAKDCLLVYSQEETESLNASIGCCSFIEGELDDRFLDDLGLKFKTLAEVC  
 LGQKIDINKEIEQRKPAETESMNTASHSLCEQTMVNSENTYSSGSSFPVPSLQEQANAIEKVTQEIYTER  
 SVSSRQAQKVATPLPDPMASRNVIATETSYVTGSTMPTTIVILGPSQPQSLIVTERVYAPASTLVDPQPYA  
 NEGTVVTVTERVIQPHGGGSPLEGTQHLQDVPYVMVRERESFLAPSSGVQPTLAMPNIAVQGNVTVTERV  
 LAPASTLQSSYQIPTENSMTARNTTVSAGVPGPLPDFGLEESGHSNSTITTSSTRVTKHSTVQHSYS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001943

**ORF Size:** 3354 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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).

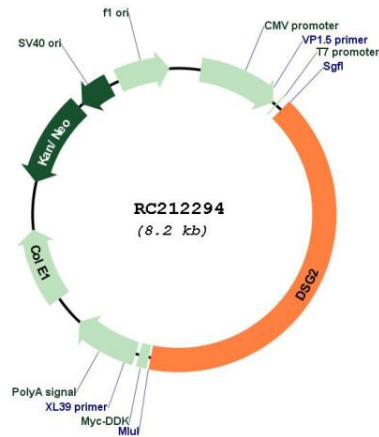
**Reconstitution Method:**

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.

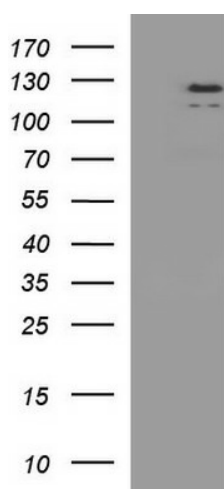
**RefSeq:** [NM\\_001943.5](#)  
**RefSeq Size:** 3450 bp  
**RefSeq ORF:** 3357 bp  
**Locus ID:** 1829  
**UniProt ID:** [Q14126](#)  
**Cytogenetics:** 18q12.1  
**Domains:** CA  
**Protein Families:** Transmembrane  
**Protein Pathways:** Arrhythmogenic right ventricular cardiomyopathy (ARVC)  
**MW:** 122.29 kDa

**Gene Summary:** This gene encodes a member of the desmoglein family and cadherin cell adhesion molecule superfamily of proteins. Desmogleins are calcium-binding transmembrane glycoprotein components of desmosomes, cell-cell junctions between epithelial, myocardial, and other cell types. The encoded preproprotein is proteolytically processed to generate the mature glycoprotein. This gene is present in a gene cluster with other desmoglein gene family members on chromosome 18. Mutations in this gene have been associated with arrhythmogenic right ventricular dysplasia, familial, 10. [provided by RefSeq, Jan 2016]

### Product images:



Circular map for RC212294



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY DSG2 (Cat# RC212294, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-DSG2 (Cat# [TA590719]). Positive lysates [LY419645] (100ug) and [LC419645] (20ug) can be purchased separately from OriGene.