

Product datasheet for **RG214156**

Bestrophin (BEST1) (NM_004183) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Bestrophin (BEST1) (NM_004183) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	BEST1
Synonyms:	ARB; BEST; Best1V1Delta2; BMD; RP50; TU15B; VMD2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG214156 representing NM_004183
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGACCATCACTTACACAAGCCAAGTGGCTAATGCCCGCTTAGGCTCCTTCTCCCGCTGCTGCTGTGCT
 GGCGGGCAGCATCTACAAGCTGCTATATGGCGAGTTCTTAATCTTCTGCTCTGCTACTACATCATCCG
 CTTTATTTATAGCTGGCCCTCACGGAAGAACAACAGCTGATGTTTGAGAAACTGACTCTGTATTGCGAC
 AGCTACATCCAGCTCATCCCATTTCTTCGTGCTGGGCTTCTACGTGACGCTGGTCTGACCCGCTGGT
 GGAACCACTACGAGAACCCTGCCGTGGCCGACCGCCTCATGAGCCTGGTGTGGGCTTCTCGAAGGCAA
 GGACGAGCAAGGCCGGCTGCTGCGGCGCACGCTCATCCGCTACGCCAACCTGGGCAACGTGCTCATCCTG
 CGCAGCGTCAGCACCGCAGTCTACAAGCGCTTCCCAGCGCCAGCACCTGGTGAAGCAGGCTTTATGA
 CTCGGCAGAACACAAGCAGTTGGAGAACTGAGCCTACCACACAACATGTTCTGGGTGCCCTGGGTGTG
 GTTTGCCAACCTGTCAATGAAGCGTGGCTTGGAGGTGAATCCGGGACCCTATCTGCTCCAGAGCCTG
 CTGAACGAGATGAACACCTTGCCTACTCAGTGTGGACACCTGTATGCCTACGACTGGATTAGTATCCCAC
 TGGTGTATACACAGGTGGTACTGTGGCGGTGTACAGCTTCTTCTGACTTGTCTAGTTGGGCGGAGTT
 TCTGAACCCAGCCAAGGCCTACCCTGGCCATGAGCTGGACCTCGTTGTGCCCGTCTTACGTTTCTGCGAG
 TTCTTCTTCTATGTTGGCTGGCTGAAGGTGGCAGAGCAGCTCATCAACCCCTTTGGAGAGGATGATGATG
 ATTTTGAGACCAACTGGATTGTGACAGGAATTTGAGGTGTCCCTGTTGGCTGTGGATGAGATGCACCA
 GGACCTGCCTCGGATGGAGCCGGACATGACTGGAATAAGCCCGAGCCACAGCCCCCTACACAGCTGCT
 TCCGCCAGTTCCGTGAGCCTCCTTTATGGGCTCCACCTCAACATCAGCCTGAACAAAGAGGAGATGG
 AGTCCAGCCCAATCAGGAGGACGAGGAGGATGCTCAGCTGGCATCATTTGGCCGCTTCTAGGCCTGCA
 GTCCCATGATCACCATCCTCCCAGGGCAAACCTCAAGACCAAACCTACTGTGGCCCAAGAGGGAATCCCTT
 CTTCCACGAGGGCCTGCCCAAAAACCACAAGGCAGCCAAACAGAACGTTAGGGGCCAGGAAGACAACAAGG
 CCTGGAAGCTTAAGGCTGTGGACGCCTTCAAGTCTGCCCACTGTATCAGAGGCCAGGCTACTACAGTGC
 CCCACAGACGCCCTCAGCCCCACTCCCATGTTCTTCCCCTAGAACCATCAGCGCCGTCAAAGCTTAC
 AGTGTACAGGCATAGACACCAAAGACAAAAGCTTAAAGACTGTGAGTTCTGGGGCCAAGAAAAGTTTTG
 AATTGCTCTCAGAGAGCGATGGGCTTGTGGAGCACCAGAAGTATCTCAAGTGAAGGAGAAAAGTGT
 GGAGTTTAACTGACGGATATGCCAGAGATCCCCGAAAATCACCTCAAAGAACCTTTGGAACAATCACCA
 ACCAACATACACTACTCAAGATCATATGGATCCTTATTGGCCTTGGAAAACAGGGATGAAGCAC
 ATTCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG214156 representing NM_004183
 Red=Cloning site Green=Tags(s)

MTITYTSQVANARLGSFRRLLLCWRGSIYKLLYGEFLIFLLCYIIRFIYRLALTEEQQLMFEKLTLYCD
 SYIQLIPISFVLGFYVTLVVTRWVNQYENLPWPDRMLSLVSGFVEGKDEQGRLLRRTLIRYANLGNVLIL
 RSVSTAVYKRFPSAQLVQAGFMTPAEHKQLEKLSLPHNMFVWPWWFANLSMKAWLGGRIRDPILLQSL
 LNMNLTQTQCGHLAYDWISIPLVYTQVVTVAVYSFFLTCLVGRQFLNPAKAYPGHELDLVVPVFTFLQ
 FFFVYVWLVKVAEQLINPFGEDDDDFETNWI VDRNLQVSL LAVDEMHQDLPRMEPDMYWNKPEPQPPYTAA
 SAQFRRASFMGSTFNISLNKEEMEFQPNQEDDEDAHAGIIGRFLGLQSHDHHPPRANSRTKLLWPKRESL
 LHEGLPKNHKAQKQNVRGQEDNKAWKLKAVDAFKSAPLYQRPGYYSAPQTPLSPTPMFFPLEPSAPSKLH
 SVTGIDTKDKSLKTVSSGAKKSFELLSSESDGALMEHPEVSQVRRKTVFENLTDMP EIPENHLKEPLEQSP
 TNIHTTLKDHMPYWALENRDEAHS

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

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 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_004183.4](#)

RefSeq Size: 2673 bp

RefSeq ORF: 1758 bp

Locus ID: 7439

UniProt ID: [O76090](#)

Cytogenetics: 11q12.3

Domains: DUF289

Protein Families: Druggable Genome, Ion Channels: Other, Transmembrane

Gene Summary:

This gene encodes a member of the bestrophin gene family. This small gene family is characterized by proteins with a highly conserved N-terminus with four to six transmembrane domains. Bestrophins may form chloride ion channels or may regulate voltage-gated L-type calcium-ion channels. Bestrophins are generally believed to form calcium-activated chloride-ion channels in epithelial cells but they have also been shown to be highly permeable to bicarbonate ion transport in retinal tissue. Mutations in this gene are responsible for juvenile-onset vitelliform macular dystrophy (VMD2), also known as Best macular dystrophy, in addition to adult-onset vitelliform macular dystrophy (AVMD) and other retinopathies. Alternative splicing results in multiple variants encoding distinct isoforms. [provided by RefSeq, Nov 2008]