

Product datasheet for **RG214168**

EHD3 (NM_014600) Human Tagged ORF Clone

Product data:

| | |
|---------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | EHD3 (NM_014600) Human Tagged ORF Clone |
| Tag: | TurboGFP |
| Symbol: | EHD3 |
| Synonyms: | PAST3 |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-AC-GFP (PS100010) |
| E. coli Selection: | Ampicillin (100 ug/mL) |



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ORF Nucleotide Sequence:

>RG214168 representing NM_014600
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTTTACGCTGGCTGGGTACGGACGACCCGGAGGAAGGACCCCGAGGTTTTCCAGACGGTGGTGGAGG
 GGCTCAAGAACTCTACAAGAGCAAGCTGCTGCCCTTGAAGAGCATTACCGCTTCCACGAGTTCCACTC
 GCCCGCCCTGGAGGATGCCGACTTCGACAACAAGCCCATGGTTCTGCTGGTGGGCCAGTACTCCACTGGG
 AAGACCACCTTTCATCAGGTACTGCTGGAACAGGACTTCCAGGCATGAGGATTGGGCTGAGCCACCA
 CAGACTCCTTCATTGCGGTGATGCAGGGAGACATGGAGGGGATCATCCCTGGGAACGCCCTGGTGGTGA
 TCCCAAGAAACCTTCAGGAACTCAACGCCTTTGGCAACGCCTTCTGAACAGTTCTGTGTGCCAG
 CTACCTAACCTGTGCTGGAGAGCATCAGCGTCATCGACACACCAGGGATCCTCTCTGGGAGAAGCAGA
 GGATCAGCCGGGGTATGACTTTGCAGTGTCTTGGTGGTTTCCGAGCGGGTGGACCGCATATTCT
 GCTCTTCGATGCCCAAACTGGACATCTCTGATGAGTTCTCAGAAGTCATCAAAGCCCTCAAGAACCAC
 GAGGACAAGATGCGAGTGGTGTGAACAAAGCTGACCAGATCGAGACGCAGCAGCTGATGCGGGTGTACG
 GGGCCCTCATGTGGTCTTGGGGAAGATCGTGAACACCCAGAGGTGATCCGGGTCTACATCGGGTCTCT
 CTGGTCCCACCCCTCTCATCCCTGACAACCGGAAGCTCTTGGAGGTGAGGAACAGGACCTATTGAGG
 GACATCCAGAGTCTGCCCGAAATGCTGCCCTGCGCAAGCTCAACGACCTCATAAAAGGGCCAGGCTGG
 CCAAGGTCACGCCTACATCATCAGTCTCTGAAGAAGGAGATGCCCTCGGTGTTCCGGGAAGGACAACA
 GAAGAAGGAGCTGGTCAACAACCTGGCCGAGATCTATGGCCGGATCGAGCGGGAGCACCAGATCTCACCT
 GGGGACTTCCCAATCTGAAGAGGATGCAGGACCAGCTGCAGGCCAGGACTTTAGCAAGTTCAGCCGC
 TGAAGCAAGCTGCTGGAGGTAGTGGACGACATGCTGGCCCATGACATTGCCAGCTCATGGTGTAGT
 GCGCCAGGAGGATCACAGCGGCCCATCCAGATGGTGAAGGGCGGAGCGTTTCGAGGGCACCTGCACGGC
 CCTTTGGCATGGCTATGGGAGGGGGCTGGAGAAGGTATCGATGATGCTGAGTGGTGGTGGCCAGGG
 ACAAGCCCATGTACGACGAGATCTTCTACACCCTGTACCCTGGATGGCAAGATCACAGGCGCTAATGC
 CAAGAAGGAGATGGTGCCTCCAAGCTGCCAACAGTGTGCTGGCAAGATCTGGAAGCTGGCCGACATT
 GACAAGGATGGCATGCTGGACGACGAGTGTGCACTGGCCAACCACCTCATCAAAGTCAAGCTGGAGG
 GGCACGAGCTGCCAACGAGCTGCCTGCCACCTCTGCCCCGTCGAAGAGGAAAGTTGCCGAG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG214168 representing NM_014600
 Red=Cloning site Green=Tags(s)

MFSWLGTD DRRRRKDPEVFQTVSEGLKLLYKSKLLPLEEHYRFHEFHSPALEDADFDNKPMVLLVGQYSTG
 KTTFFIRYLLEQDFPGMRIGPEPTTDSFIAVMQGDMEGIIPGNALVVDPKKPFRLNFAFNALNRFVCAQ
 LPNPVLESISVIDTPGILSGEKQRISRGYDFAAVLEWFAERVDRIILLFDAHKLDISDEFSEVIKALKNH
 EDKMRVVLNKADQIETQQLMRVYGALMWSLKGIVNTPEVIRVYIGSFWSHPLLIPDNRKLFEEAEQDLFR
 DIQSLPRNAALRKLNDLIKRRARLAKVHAYIISLKKEMPVSFVGKDNKKELVNNLAEIYGRIEREHQISP
 GDFPNLKRMDQLQAQDFSKFQPLKSKLLEVDDMLAHDIAQLMVLVRQEESQRPIQMVKGGAFEGTLHG
 PFGHGYGEGAGEGIDDAEWVWARDKPMYDEIFYTLSPVDGKITGANAKKEMVRSKLPNSVLGKIWLADI
 DKDGM LDDDEFALANHLIKVKLEGHLPNELPAHLLPPSKR KVAE

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_014600

ORF Size: 1605 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_014600.3](#)

RefSeq Size: 3583 bp

RefSeq ORF: 1608 bp

Locus ID: 30845

UniProt ID: [Q9NZN3](#)

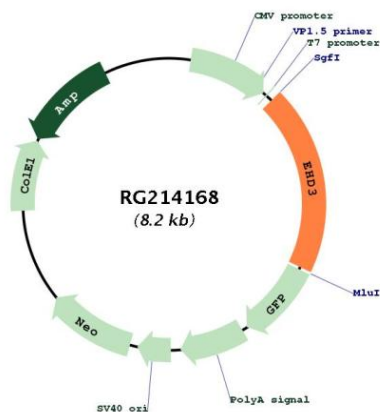
Cytogenetics: 2p23.1

Domains: EH, EFh

Protein Pathways: Endocytosis

Gene Summary: ATP- and membrane-binding protein that controls membrane reorganization/tubulation upon ATP hydrolysis (PubMed:25686250). In vitro causes tubulation of endocytic membranes (PubMed:24019528). Binding to phosphatidic acid induces its membrane tubulation activity (By similarity). Plays a role in endocytic transport. Involved in early endosome to recycling endosome compartment (ERC), retrograde early endosome to Golgi, and endosome to plasma membrane (rapid recycling) protein transport. Involved in the regulation of Golgi maintenance and morphology (PubMed:16251358, PubMed:17233914, PubMed:19139087, PubMed:23781025). Involved in the recycling of internalized D1 dopamine receptor (PubMed:21791287). Plays a role in cardiac protein trafficking probably implicating ANK2 (PubMed:20489164). Involved in the ventricular membrane targeting of SLC8A1 and CACNA1C and probably the atrial membrane localization of CACNA1GG and CACNA1H implicated in the regulation of atrial myocyte excitability and cardiac conduction (By similarity). In conjunction with EHD4 may be involved in endocytic trafficking of KDR/VEGFR2 implicated in control of glomerular function (By similarity). Involved in the rapid recycling of integrin beta-3 implicated in cell adhesion maintenance (PubMed:23781025). Involved in the unidirectional retrograde dendritic transport of endocytosed BACE1 and in efficient sorting of BACE1 to axons implicating a function in neuronal APP processing (By similarity). Plays a role in the formation of the ciliary vesicle, an early step in cilium biogenesis; possibly sharing redundant functions with EHD1 (PubMed:25686250).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RG214168