

## Product datasheet for **MR208579**

### Ehd3 (NM\_020578) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Ehd3 (NM_020578) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Ehd3
Synonyms:	Ehd2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR208579 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGTTTCAGTTGGCTGGGTAAACGATGATCGCCGCAAGAAGGACCCTGAGGTCTTCCAGACGGTGAGCGATG  
 GACTCAAAAACTCTACAAGACCAAGCTGCTGCCCTCGGAAGAGTATTACCGCTTCCACGAGTTCCACTC  
 GCCCGCCCTGGAAGATGCTGATTTTCGACAACAAGCCCATGGTCTCTGTTGGTGGGCCAGTACTCTACCGGC  
 AAGACCACCTTATCAGGTACTGCTGGAACAGGATTTTCCAGGCATGAGGATTGGGCTGAGCCGACCA  
 CTGATTCCTTATAGCAGTGATGCAGGGAGATGTGGAGGGGATCATTCCCGGGAATGCCTTGGTGGTGA  
 TCCAAAGAAACCTTTCAGAAAGCTCAACGCCTTTGGCAACGCCTTCTGAACAGGTTTGTGTGTGCCAG  
 CTGCCAACGCCGTGCTTGAAGTATCAGTGTGATCGACACACCGGGGATCCTCTCTGGGAGAAGCAGA  
 GGATCAGCCGAGGTATGATTTTGTCTGCGTCTCGAATGGTTTGTCTGAGCGGTGGACCGAATTATCCT  
 ACTCTTCGACGCCACAAGCTGGACATCTCCGATGAGTTCTCAGAAGTCATCAAGGCTCTCAAGAACCAT  
 GAGGACAAGATGCGCGTAGTGTGAACAAAGCTGACCAGATCGAGACCCAGCAGCTGATGCGAGTATACG  
 GAGCCCTCATGTGGTCCCTGGGGAAGATCGTGAACACCCCGAGGTGATCCGGGTCTACATTGGCTCCTT  
 CTGGTCCCACCCACTCCTCATTCCCACAACCGGAAGCTCTTTGAAGCTGAAGAGCAAGACTTGTTCAGA  
 GACATTACAGTCTACCCCGTAATGCTGCTCTTCGAAAGCTCAACGATCTCATCAAGAGAGCCCGGCTGG  
 CCAAGGTCACGCCTACATCATCAGTCTCTTGAAGAAGGAGATGCCCTCAGTGTTTGGGAAGGACACCAA  
 AAAGAAAGAACTGGTGAACAACCTGGCTGAGATCTATGGCCGATTGAGCGAGAACCAGATCTCCCT  
 GGAGACTTCCCAACCTGAAGAGGATGCAGGACCAGCTGCAGGCCAGGACTTCAAGAAATTCAGCCAC  
 TGAAGAGCAAGCTGCTGGAAGTGGTTGATGATATGCTGGCTCATGACATTGCCAGCTCATGGTGTGGT  
 CGGCCAGGAAGAGACCCAACGGCCTGTCCAGATGGTGAAGGGCGGAGCATTGAGGGAACCTTACAAGGC  
 CCCTTCGGGCACGGCTATGGAGAGGGAGCTGGGAGGGCATCGATGATGCCGAGTGGTGGTGGCGCGGG  
 ACAAGCCTATGTATGATGAGATCTTCTACACCTTATCCCCAGTGGATGGCAAGATCACAGGTGCCAACGC  
 CAAGAAGGAGATGGTGCCTCCAAGTTGCCAACAGCGTCTGGCAAGATCTGGAAGCTAGCCGACATT  
 GACAAGGATGGCATGTTGGATGACGAGGAGTTGCCCTGGCCAACCACCTTATCAAAGTCAAGCTAGAGG  
 GGCATGAGCTGCCAGTGAAGTACTGCCACCTCCTCCCTCCATCTAAGAGGAAAGTATCAGAA

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR208579 protein sequence  
 Red=Cloning site Green=Tags(s)

MFSWLGNDDRKKDPEVFQTVSDGLKLYKTKLLPLEEYRFHEFHSPALEDADFDNKPMLLVGQYSTG  
 KTTFIRYLLEQDFPGRIGPEPTTDSFIIVMQDVEGIIPGNALVDPKPKFRKLNFAFGNAFLNRFVCAQ  
 LPNAVLESISVIDTPGILSGEKQRISRGYDFAAVLEWFAERVDRIILLFDAHKLDISDEFSEVIKALKNH  
 EDKMRVVLNKADQIETQQLMRVYGALMWSLGIKIVNTPEVIRVYIGSFWSHPLLIPDNRKLFEAEQDLFR  
 DIQSLPRNAALRKLNDLIKRRARLAKVHAYIISLKKEMPSVFGKDTKKKELVNNLAEIYGRIEREHQISP  
 GDFPNLKRMQDQLQAQDFSKFQPLKSKLLEVDDMLAHDIAQLMVLVRQEETQRPVQMVKGGAFEGTLQG  
 PFGHGYGEGAGEGIDDAEWVVARDKPMYDEIFYTLSPVDGKITGANAKKEMVRSKLPNSVLGKIWKLADI  
 DKDGMLDDEEFALANHLIKVKLEGHHELPSELPAHLLPPSKRQVSE

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**

**ACCN:** NM\_020578

**ORF Size:** 1608 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\\_020578.3](#)
**RefSeq Size:** 3658 bp

**RefSeq ORF:** 1608 bp

**Locus ID:** 57440

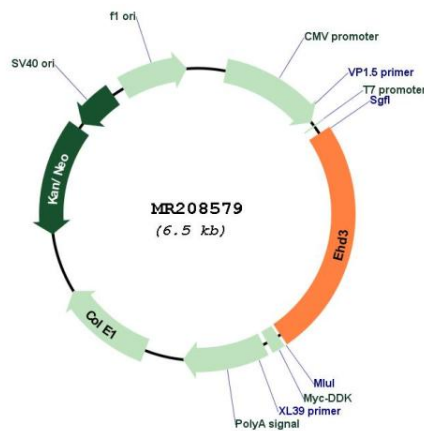
**UniProt ID:** [Q9QXY6](#)

**Cytogenetics:** 17 45.2 cM

**MW:** 60.8 kDa

**Gene Summary:** ATP- and membrane-binding protein that controls membrane reorganization/tubulation upon ATP hydrolysis. In vitro causes tubulation of endocytic membranes (By similarity). Binding to phosphatidic acid induces its membrane tubulation activity (PubMed:26896729). 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 (By similarity). Involved in the recycling of internalized D1 dopamine receptor (By similarity). Plays a role in cardiac protein trafficking probably implicating ANK2. 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 (PubMed:20489164, PubMed:24759929, PubMed:25825486). In conjunction with EHD4 may be involved in endocytic trafficking of KDR/VEGFR2 implicated in control of glomerular function (PubMed:21408024). Involved in the rapid recycling of integrin beta-3 implicated in cell adhesion maintenance (By similarity). 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. 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 MR208579