

## Product datasheet for RC200912

### CHAC1 (NM\_024111) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** CHAC1 (NM\_024111) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** CHAC1  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >RC200912 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC

ATGAAGCAGGAGTCTGCAGCCCCGAACACCCCGCCACCTCGCAGTCCCCTACGCCGTCCGCTCAGTTCC  
 CCCGAAACGACGGCGACCCTCAAGCGCTGTGGATTTTCGGGTACGGCTCCCTGGTGTGGAGGCCGACTT  
 CGCCTACAGCGACAGCCGTGTGGGCTTCGTGCGCGGCTACAGCCGCCGTTTCTGGCAGGGAGACACCTTC  
 CATCGGGCAGCGACAAGATGCCTGGCCGTGTGGTGACGCTCCTGAAGATCATGAGGGCTGCACCTGGG  
 GCGTGGCATACCAAGTGCAAGGGGAGCAGGTAAGCAAGGCCCTGAAGTACCTGAATGTGCGAGAGGCAGT  
 GCTTGGTGCTACGATACCAAGGAGGTACCTTCTATCCCCAAGATGCTCCTGACCAACCACTGAAGGCA  
 TTGGCCTATGTGGCCACCCACAGAACCCTGGTTACCTGGGCCCTGCGCCTGAAGAGGCCATTGCCACGC  
 AGATCCTGGCCTGCCGGGCTTCTCCGGCCACAACCTTGAATACTTGCTGCGTCTGGCAGACTTCATGCA  
 GCTCTGTGGGCTCAGGCGCAGGACGAGCACCTGGCAGCCATCGTGGACGCTGTGGGCACCATGTTGCC  
 TGCTTCTGCCCCACCGAGCAGGCTCTGGCGCTGGTG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC200912 protein sequence  
 Red=Cloning site Green=Tags(s)

MKQESAAPNTPPTSQSPTPSAQFPRNDGDPQALWIFGYGSLVWRPDFAYSDSRVGFVRGYSRRFWQGDTF  
 HRGSDKMPGRVVTLLDHEGCTWGVAYVQVQGEQVSKALKYLNREAVLGGYDTKEVTFYPQDAPDQPLKA  
 LAYVATPQNPGYLGPAPEEAIATQILACRGFSGHNLEYLLRLADFMQLCGPQAQDEHLAAIVDAVTMLP  
 CFCPTQALALV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV


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**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6083\\_a06.zip](https://cdn.origene.com/chromatograms/mk6083_a06.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_024111

**ORF Size:** 666 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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_024111.6](#)

**RefSeq Size:** 1578 bp

**RefSeq ORF:** 669 bp

**Locus ID:** 79094

**UniProt ID:** [Q9BUX1](#)

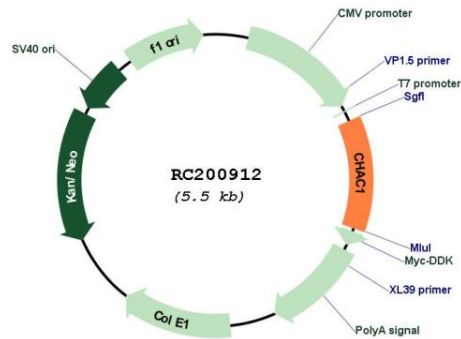
**Cytogenetics:** 15q15.1

**Domains:** ChaC

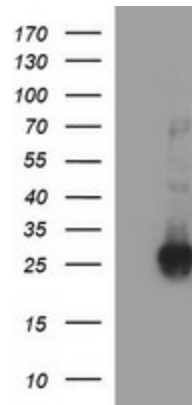
**MW:** 24.4 kDa

**Gene Summary:** This gene encodes a member of the gamma-glutamylcyclotransferase family of proteins. The encoded protein has been shown to promote neuronal differentiation by deglycation of the Notch receptor, which prevents receptor maturation and inhibits Notch signaling. This protein may also play a role in the unfolded protein response, and in regulation of glutathione levels and oxidative balance in the cell. Elevated expression of this gene may indicate increased risk of cancer recurrence among breast and ovarian cancer patients. [provided by RefSeq, Sep 2016]

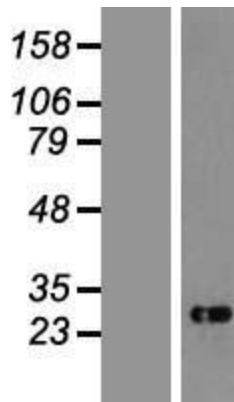
## Product images:



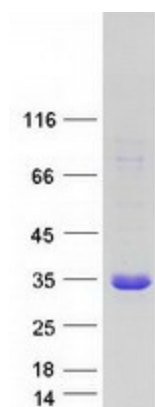
Circular map for RC200912



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY CHAC1 (Cat# RC200912, 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-CHAC1 (Cat# [TA507052]). Positive lysates [LY432159] (100ug) and [LC432159] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY411345]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200912 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CHAC1 protein (Cat# [TP300912]). The protein was produced from HEK293T cells transfected with CHAC1 cDNA clone (Cat# RC200912) using MegaTran 2.0 (Cat# [TT210002]).