

## Product datasheet for **RC220007**

### CEP78 (NM\_032171) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	CEP78 (NM_032171) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CEP78
Synonyms:	C9orf81; CRDHL; IP63
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide  
Sequence:**

>RC220007 representing NM\_032171  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGATCGACTCCGTGAAGCTGCGCCGACAGCGCGGACTTCTTCTCCACTACGAGTACCTGTGCG  
 CGCTGCAGAACTCGGTGCCGCTGCCCGCGTGCAGCCTGTCTCCGGGAGGGCGTCTGGATTTCAACGC  
 CGACCCCTCCGCGGGTGGACTGGGCGCCTCTGCTGAGCACCCCTCAAGATCAATAAAGACCTGCCCTTG  
 GTCTCCATCAAGAGCTTCTCCAGCCCTGGCTGGGGGACACAGTTCTGACATGAATAAATTTGCAGAA  
 GTCGTGTTCTGCGATAAGATACAAAGATGTGACCTTCCAGTTGTGTAAGCTCTTAAAGCTGTTTAAG  
 TATATCAAGTGTCTAAAGAACCTGGAGCTAAATGGACTAATTCTGAGAGAGAGGGATTTAACTATTCTA  
 GCAAAGGATTGAATAAATCGGCTTCTTTGGTGCACCTGTCTCTGCAAATGTCCAATTGGAGATGGAG  
 GTTTAGAAATTTGTCAAGGTATAAAGAGCTCTATCACTCTTAAAGACAGTCAACTTACAGGATGTAA  
 TCTGACATGGCAGGGAGCAGATCACATGGCCAAGATCTTAAAGTATCAGACCATGAGAAGGCATGAAGAA  
 ACCTGGGCTGAGAGTCTTCGCTATAGGAGACCTGATCTTGACTGTATGGCTGGCTTAAAGAGTATCACAC  
 TGAATTGCAACACACTTATTGGTGACCTAGGTGCATGTGCTTTTGCAGACTCTCTCAGTGAGGATTTATG  
 GCTGAGAGCTCTTGACCTGCAACAGTGCAGCCTCACCAATGAAGGAGCAAAGGCTTTGCTAGAGGCCCTT  
 GAAACCAATACAACCTCTGGTCTGTTCTGGATATAAGAAAAATCCACTCATTGATCATTCTATGATGAAA  
 CAGTTATCAAAAAAGTCTCCAGAATGGAAGGAGTGCCAAATCAGAGTACCAGTGGATAACTTCTCCATC  
 AGTGAAGGAACCTCAAAAAGTCTAAACAGAAAAGGAGAATAAATCTAGGAAGTGGTCACAAAAGGA  
 AAAGCTACTATTAGAATTGTAGGATTGGCTACAAAAGAACTGTAAAGTAGTGGCAGAAAACACTCCCTTG  
 GTAAAGAATATTATGCGCCCGCACCTCTCCACCTGGTGTCTGGTTTTCTTGCCGTGGCGTACTGCAGA  
 ACGTGCAAAAAGACACAGGGGTTTTCCATTAAATCAAAACACGTGATATATGTAATCAGTTGCAGCAACCA  
 GGTTCCTGTGACTGTGACAGTAGAGAGTCTTCATCCTCTGAAGTTGAAGAGTTGATGATTCTTCAG  
 AGAGTGTTCATGAAGTGCTGAGAAAAGTATAGAACAAGAAGCATTACAGGAAAACTGGAGGAGTG  
 CCTAAAGCAGTTAAAGGAAGAAAGAGTGATAAGGCTTAAGGTTGATAAACGAGTCAGTGAGCTGGAACAT  
 GAAAATGCCAGTTAAGAAATATAAATTTCTTTGTCTGAAGCCCTTCATGCACAGTCTTGACAAATA  
 TGATCCTGGATGATGAAGGTGTTTTGGCAGCATTGAGAATCTTTTTCAGAAAGTTTCATGCTTTCTTGA  
 TCTCCTTAAAGATGCTGGGCTTGGCAGCTTGCCACAATGGCTGGGATAGATCAGTCAGATTTTCAATTA  
 CTAGGTATCCCCAGATGACTTCTACTGTTAGTAATCCACCTAAAGAAGAAAAGAAGGCGCTTGAAGATG  
 AAAAACAGAACCGAAGCAGAATGCCCTAGGGCAAATGCAAAATATCCAGTTTCAGAAAATACAGGTGA  
 TGCTAGAATTCCTTTGCCTCTCGACTCCTTTCCTGTCCAGTTTCTACTCCAGAGGGCTTAGGAACTTCC  
 AGCAACAACCTAGGAGTCCCAGCTACTGAGCAGCGCAGGAGTCTTTTGAAGGATTCATTGCTAGAATGT  
 GTTCTCCTTACCAGATGCGACTTCTGGAAGTGGAAAGTCAAAGAAAAGAAGAGGAGTTGTCCAGAAATAG  
 CAGATCTTCTTTCAGAGAAAAGACCAAAACAGGTGAATATACAAAAAACACTCTGATAAGCAACACCTT  
 GGAAAGGACCTGCATTCC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC220007 representing NM\_032171  
Red=Cloning site Green=Tags(s)

MIDSVKLRSDAADFFSHYEYLCALQNSVPLPAVRACLREGVLDNFADRLRGVDWAPLLSTLKINKDLPL  
 VSIKSFQFWLGDGSDMNKFCRSRVPPIRYKDVTFQLCKALKGCLSISSVLKNLELNLILRERDLTIL  
 AKGLNKSASLVHLSLANCPIGDGGLEIICQGIKSSITLKTVMFTGCNLTWQGADHMAKILKYQTMRRHEE  
 TWAESLRVRRPDLDCMAGLRRTILNCNTLIGDLGACAFADSLSEDLWLRALDLQQCGLTNEGAKALLEAL  
 ETNTTLVVLDIRKNPLIDHSMMKAVIKKVLQNGRSKSEYQWITSPSVKEPSKTAKQKRRTIILGSGHKG  
 KATIRIVGLATKKPVSSGRKHSLGKEYYAPAPLPPGVSGFLPWRTAERAKRHRGFPLIKTRDIGNLQQP  
 GFPVTVTVESPPSSSEVEEVDSSSESVHEVPEKTSIEQEALQELEECLKQLKEERVIRLKVDRVSELEH  
 ENAQLRNINFSLSEALHAQSLTNMILDDGVLGSIENSFQKFHAFDILLKADAGLQLATMAGIDQSDQFL  
 LGHPQMTSTVSNPPKEEKKALEDEKPEPKQNALGQMNIQFQKITGDARIPLPLDSFPVPVSTPEGLGTS  
 SNNLGVPAEQEQESFEGFIARMCSPSPDATSGTGSQRKEEELSRNSRSSSEKTKTGEYTKKHSKQHP  
 GKDLHS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk8020\\_c11.zip](https://cdn.origene.com/chromatograms/mk8020_c11.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_032171

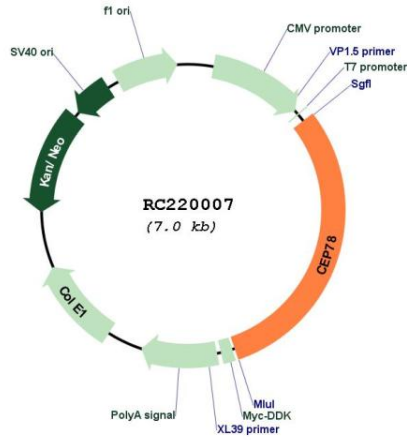
**ORF Size:** 2118 bp

**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](#)

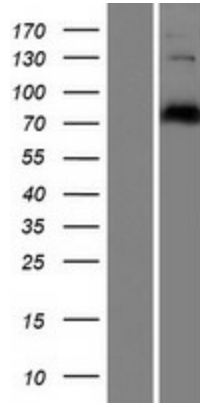
**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_032171.3</a>
<b>RefSeq Size:</b>	2719 bp
<b>RefSeq ORF:</b>	2121 bp
<b>Locus ID:</b>	84131
<b>UniProt ID:</b>	<a href="#">Q5JTW2</a>
<b>Cytogenetics:</b>	9q21.2
<b>MW:</b>	78.1 kDa
<b>Gene Summary:</b>	This gene encodes a centrosomal protein that is both required for the regulation of centrosome-related events during the cell cycle, and required for ciliogenesis. The encoded protein has an N-terminal leucine-rich repeat (LRR) domain with six consecutive LRR repeats, and a C-terminal coiled-coil domain. It interacts with the N-terminal catalytic domain of polo-like kinase 4 (PLK4) and colocalizes with PLK4 to the distal end of the centriole. Naturally occurring mutations in this gene cause defects in primary cilia that result in retinal degeneration and sensorineural hearing loss which are associated with cone-rod degeneration disease as well as Usher syndrome. Low expression of this gene is associated with poor prognosis of colorectal cancer patients. [provided by RefSeq, Mar 2017]

Product images:



Circular map for RC220007



Western blot validation of overexpression lysate (Cat# [LY410298]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC220007 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).