

## Product datasheet for **RC200547**

### Exonuclease 1 (EXO1) (NM\_130398) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Exonuclease 1 (EXO1) (NM_130398) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Exonuclease 1
Synonyms:	HEX1; hExo1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC200547 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGGGATACAGGGATTGCTACAATTTATCAAAGAAGCTTCAGAACCATCCATGTGAGGAAGTATAAAG  
 GGCAGGTAGTAGCTGTGGATACATATTGCTGGCTTCACAAAGGAGCTATTGCTTGTGCTGAAAACTAGC  
 CAAAGGTGAACCTACTGATAGGTATGTAGGATTTTGTATGAAATTTGTAATATGTTACTATCTCATGGG  
 ATCAAGCCTATTCTCGTATTTGATGGATGTACTTTACCTTCTAAAAAGGAAGTAGAGAGATCTAGAAGAG  
 AAAGACGACAAGCCAATCTTCTAAGGGAAAGCAACTTCTCGTGAGGGGAAAGTCTCGGAAGCTCGAGA  
 GTGTTTACCCGGTCTATCAATATCACACATGCCATGGCCACAAAGTAATTAAGCTGCCCGTCTCAG  
 GGGGTAGATTGCCTCGTGGCTCCCTATGAAGCTGATGCGCAGTTGGCCTATCTTAACAAAGCGGAATTG  
 TGCAAGCCATAATTACAGAGGACTCGGATCTCCTAGCTTTTGGCTGTAAAAAGGTATTTTAAAGATGGA  
 CCAGTTTGGAAATGGACTTGAAATTGATCAAGCTCGGCTAGGAATGTGCAGACAGCTTGGGGATGTATTC  
 ACGGAAGAGAAGTTTCGTTACATGTGTATTCTTTCAAGTTGTGACTACCTGTCATCACTCGTGGGATTG  
 GATTAGCAAAGGCATGCAAAGTCTTAAGACTAGCCAATAATCCAGATATAGTAAAGGTTATCAAGAAAAAT  
 TGGACATTATCTCAAGATGAATATCACGGTACCAGAGGATTACATCAACGGGTTTATTCGGGCCAACAAAT  
 ACCTTCTCTATCAGCTAGTTTTTATGCCATCAAAGGAAACTTATTCCTCTGAACGCCTATGAAGATG  
 ATGTTGATCCTGAAACACTAAGCTACGCTGGGCAATATGTTGATGATTCCATAGCTCTTCAAATAGCACT  
 TGGAAATAAGATATAAATACTTTTGAACAGATCGATGACTACAATCCAGACACTGCTATGCCTGCCCAT  
 TCAAGAAGTCATAGTTGGGATGACAAAACATGTCAAAGTCAGCTAATGTTAGCAGCATTGGCATAGGA  
 ATTAAGTCTCCAGACCAGAGTCGGTACTGTTTCAGATGCCCCACAATTGAAGGAAAAATCCAAGTACTGT  
 GGGAGTGGAAACGAGTGATTAGTACTAAAGGGTTAAATCTCCCAAGGAAATCATCCATTGTGAAAAGACCA  
 AGAAGTGCAGAGCTGTCAGAAGATGACCTGTTGAGTCAGTATTCTCTTTCAATTTACGAAGAAGACCAAGA  
 AAAATAGCTCTGAAGGCAATAAATCATTGAGCTTTTCTGAAGTGTGTGCCTGACCTGGTAAATGGACC  
 TACTAACAAAAGAGTGTAAAGCACTCCACCTAGGACGAGAAATAAATTTGCAACATTTTTACAAAGGAAA  
 AATGAAGAAAGTGGTGCAGTTGTGGTCCAGGGACCAGAAGCAGGTTTTTTTGCAGTTTCAAGTCTACTG  
 ACTGTGTATCAAACAAAGTGAGCATCCAGCCTCTGGATGAACTGCTGTCACAGATAAAGAGAACAATCT  
 GCATGAATCAGAGTATGGAGACCAAGAAGCAAGAGACTGGTTGACACAGATGTAGCACGTAATTCAAGT  
 GATGACATTCCGAATAATCATATTCCAGGTGATCATATCCAGACAAGGCAACAGTGTTTACAGATGAAG  
 AGTCTACTCTTTTGGAGCAGCAAAATTTACAAGGACCATTTACCACCCACTTTGGGAACACTAAGAAG  
 TTGTTTTAGTTGGTCTGGAGTCTTGGAGATTTTCAAGAACGCCGAGCCCTCTCCAAGCACAGCATTG  
 CAGCAGTCCGAAGAAAGAGCGATTCCCCACCTCTTTGCCTGAGAATAATATGTCTGATGTGTCGAGT  
 TAAAGAGCGAGGAGTCCAGTACGATGAGTCTCATCCCTACGAGAAGGGGCATGTTCTTACAGTCCCA  
 GGAAAGTGGAGAATTCTCACTGCAGAGTCAAATGCATCAAAGCTTTCTCAGTGTCTAGTAAGGACTCT  
 GATTCAAGGAACTGATTGCAATTAAGTACTTGACAGTCAAAGTGACCAGACCTCCAAGCTATGTT  
 TATCTCATTTCTCAAAAAAGACACACCTCTAAGGAACAAGGTTCTGGGCTATAAAGTCCAGTTCTGC  
 AGACTCTTTTCTACAACCAAGATCAAACCTCTAGGACCTGCCAGAGCCAGTGGGCTGAGCAAGAAGCCG  
 GCAAGCATCCAGAAGAGAAGCATATAATGCCGAGAACAAGCCGGGTTACAGATCAAACCTCAATGAGC  
 TCTGAAAAAATTTGGATTTAAAAAAGATTCTGAAAAGCTTCTCCTTGTAAAGAAACCCCTGTCCCCAGT  
 CAGAGATAACATCCAACCTAACTCCAGAAGCGGAAGAGGATATATTTAACAAACCTGAATGTGGCCGTGT  
 CAAAGAGCAATATTCCAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC200547 protein sequence  
 Red=Cloning site Green=Tags(s)

MGIQGLLQFIKEASEPIHVRKYKGQVAVDTCWLHKGAIACAELKAKGEPTDRYVGFCKMFVNMLLSHG  
 IKPILVFDGCTLPSKKEVERSRERRRQANLLKGGKQLLREGKVSEARECFTRSINITAMAHKVIKAARSQ  
 GVDCLVAPYEADAQLAYLNKAGIVQAIITEDSDLLAFGCKKVIKMDQFGNGLEIDQARLGMCRQLGDVF  
 TEEKFRYMCILSGCDYLSLRGIGLAKACKVLRANNDIVKVIKIGHYLMNITVPEDYINGFIRANN  
 TFLYQLVFDPIKRKLIPLNAYEDDVPETLSYAGQYVDDSIALQIALGNKDINTFEQIDDYNPDTAMPAH  
 SRSHSWDDKTCQKSANVSSIWHRNYSRPRPESGTVSDAPQLKENPSTVGVVERVISTKGLNLPKSSIVKRP  
 RSAELSEDDLQSYLSFTKTKKNSSEGNKLSFSEVFVPLVNGPTNKKSVSTPPRTRNKFATFLQRK  
 NEESGAVVPGTRSRFFCSDSDTDCVSNKYSIQPLDEAVTDKENNLHESEYGDQEGKRLVDTDVARNS  
 DDIPNNHIPGDHDPKATVFTDEESYSFESSKFTRTISPPTLGLRSCFSWSGGLGDFSRTPSPSPSTAL  
 QQFRKSDSPTSLPENMSDVSQKSESSDDESHPLREGACSSQSQESGEFSLQSSNAKLSQCSSKDS  
 DSEESDCNIKLLDSQSDQTSKLCCLSHFSKKTPLRNKVPGLYKSSADSLSTTKIKPLGPARGSLSKKP  
 ASIQRKHHNAENKPLQIKLNELWKNFGFKDSEKLPCKKPLSPVRDNIQLTPEAEEDIFNKPECGRV  
 QRAIFQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: [https://cdn.origene.com/chromatograms/mk6237\\_c12.zip](https://cdn.origene.com/chromatograms/mk6237_c12.zip)

Restriction Sites: SgfI-MluI

Cloning Scheme:

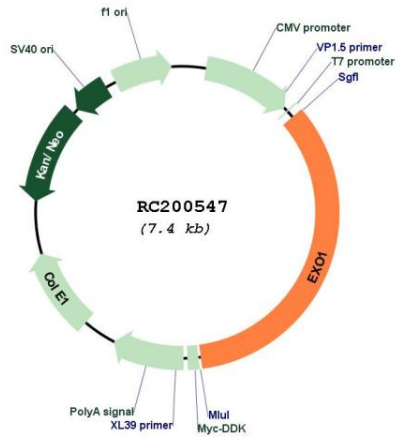
Cloning sites used for ORF Shuttling:



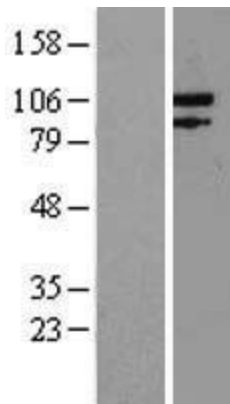
\* The last codon before the Stop codon of the ORF

<b>ACCN:</b>	NM_130398
<b>ORF Size:</b>	2538 bp
<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	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>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<a href="#">NM_130398.2</a> , <a href="#">NP_569082.1</a>
<b>RefSeq Size:</b>	3478 bp
<b>RefSeq ORF:</b>	2541 bp
<b>Locus ID:</b>	9156
<b>UniProt ID:</b>	<a href="#">Q9UQ84</a>
<b>Cytogenetics:</b>	1q43
<b>Domains:</b>	XPG_N, XPG_I
<b>Protein Families:</b>	Druggable Genome, Stem cell - Pluripotency
<b>Protein Pathways:</b>	Mismatch repair
<b>MW:</b>	94 kDa
<b>Gene Summary:</b>	This gene encodes a protein with 5' to 3' exonuclease activity as well as an RNase H activity. It is similar to the <i>Saccharomyces cerevisiae</i> protein Exo1 which interacts with Msh2 and which is involved in mismatch repair and recombination. Alternative splicing of this gene results in three transcript variants encoding two different isoforms. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RC200547



Western blot validation of overexpression lysate (Cat# [LY408989]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200547 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).