

## Product datasheet for **RN215076**

### **Ercc3 (NM\_001031644) Rat Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Ercc3 (NM_001031644) Rat Untagged Clone
Tag:	Tag Free
Symbol:	Ercc3
Synonyms:	MGC112916
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**Fully Sequenced ORF:** >RN215076 representing NM\_001031644  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGGTAAAAGAGATCGAGTGGACCGCAGACAAGAAGAAATCCAAGAAGAGGCAGTATGAAGAGGAAGAGG  
 AAGACGAAGACGACGCTCCTGGGAACGAGTCTCAGGAAGCGGTGCCCTCAGCCGCTGGGAAAACAGGTGGA  
 CGAATCCAGCACCAAAGTGGATGAATATGGAGCAAAGGACTACAGACAGCAGATGCCACTAAAGGTGAC  
 CATACTTCTAGGCCCTCTGGGTGGCTCCTGATGGCCACATTTTCTTGGAAAGCCTTCTCTCCAGTTTACA  
 AATATGCCAAGACTTCTGGTGGCAATTGCAGAGCCAGTGTGCCGGCCACGCATGTACACGAATACAA  
 GCTGACCGCTACTCCCTCTATGCAGCTGTGAGTGGGCTGCAGACCAGTGACATCACCGAGTACCTC  
 AGAAAGCTCAGTAAGACTGGAGTTCCTGATGGAATCATCCAGTTTATTAAGCTGTGCACTGTCAGCTACG  
 GAAAAGTCAAGCTGGTCTGAAGCACAACAGGTACTTTGTTGAAAGTTCTCACCTGATGTCATCCAGCA  
 TCTTCTTCAAGACCCAGTAATACGGGAATGTCGTTGAGGAATGCCGAGGGAGAGGCTACTGAACATCATC  
 ACAGAGACGTTTACGAGCAAATCTGCTATTTCTAAGACTGTGAAAGGCAGTGGTGGGGCTTCTACTTCCAC  
 AGGGGGTAGATGCGCAAGCCAAATCTGACATCCCCAAAGACCTGTTTGATTTTTATGAGCAAATGGACAA  
 GGATGAGGAGGAGGGAAGAGACACAGACAGTCTCCTTTGAAGTTAAGCAGGAGATGATCGAGGAGCTC  
 CAGAAGCGCTGCATCTGCCTAGAGTACCGCTGTTGGCAGAGTATGACTTCCGGAATGACTCTCTGAACC  
 CCGATATCAACATTGACCTGAAGCCACAGCCGTGCTCAGGCCCTATCAGGAGAAGAGCCTGCGCAAAGAT  
 GTTTGGCAATGGCGGAGCAGCTCAGGAGTCATTGTTCTCCCTGTGGTGTGGGAAAGTCCCTGGTGGGC  
 GTGACTGCCGCGTACTGTGAGAAAGCCTGTCTGGTCTGGCAACTCGGCTGTGTCTGTGGAGCAGT  
 GGAAAGCCAGTTTAAGATGTGGTCAACCATCGATGACAGCCAGATCTGCCGCTTACCTCAGATGCCAA  
 GGACAAGCCCATTTGGCTGCTCCATCGCCATTAGCACTTACTCTATGCTGGGCCACACCACAAAAGGTCA  
 TGGGAAGCTGAGAGAGTCATGGAATGGCTCAAAACCCAGGAGTGGGGCTCATGATCCTTGACGAGGTGC  
 ACACCATTCCAGCCAAGATGTTCCGGCAGTGTGACCATTGTGCAGGCCCACTGTAAGCTTGGTTTGAC  
 TGCAACCCTCGTCCGGGAAGATGACAAAATTGTTGACTTAAATTTCTTGATCGGACCCAAGCTTTACGAA  
 GCCAACTGGATGGAGCTGCAGAACAAATGGGTACATCGCCAAAGTCCAGTGTGCTGAGGTCTGGTGCCGA  
 TGTCTCCTGAGTCTACCGAGAGTATGTGGCAATCAAAACAAAGAAACGCATCCTGTTGTACACCATGAA  
 TCCCAACAAATTCAGAGCCTGCCAGTTTCTGATCAAGTTTCTGAAAGGAGGAATGACAAGATTATTGTC  
 TTTGCTGACAATGTGTTGCCTTGAAGGAATATGCTATTCGGCTGAACAAACCTTACATCTATGGGCCCA  
 CGTCCCAGGGAGAAAGGATGCAGATTCTCCAGAACTTCAAACACAACCCAAAATCAACACCATCTTCAT  
 CTCTAAGTTGGTGACACATCCTTTGATCTGCCAGAAGCAAATGTCTCATTGAGATCTCTTCCCATGGT  
 GGCTCCAGACGGCAGGAGGCGCAGAGACTGGGGCGGTAAGTCTCAGAGCCAAGAAAGGGATGGTGCAGAGG  
 AGTACAATGCCTTTTCTACTCCCTGGTGTCCCAGGACACACAGGAAATGGCTTATTCTACCAAGCGACA  
 GAGATTCTTAGTAGACCAGGTTACAGCTTTAAGGTAATCACAAGCTAGCCGGCATGGAGGAAGAGGAG  
 CTGGCATTCTCCACAAAGAGGAGCAGCAGCAGCTCCTGCAGAAGTCTGGCAGCCACTGACCTGGACG  
 CAGAGGAGGAAGTGGTGGCTGGAGATTTGGCTCTAGATCTGGCCAGGCATCCCGGCGCTTTGGCACCAT  
 GAGCTCTGTCCGGGGCAGACGATACTGTGTATATGGAGTACCCTCTCCCGAAACAAAGCCTCCACC  
 AAGCACGTGCACCCACTTTTCAAACGCTTCAGGAAG**TGA**

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI  
**ACCN:** NM\_001031644  
**Insert Size:** 2349 bp

<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<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>	<u><a href="#">NM_001031644.1</a></u> , <u><a href="#">NP_001026814.1</a></u>
<b>RefSeq Size:</b>	2643 bp
<b>RefSeq ORF:</b>	2349 bp
<b>Locus ID:</b>	291703
<b>UniProt ID:</b>	<u><a href="#">Q4G005</a></u>
<b>Cytogenetics:</b>	18p12
<b>Gene Summary:</b>	ATP-dependent 3'-5' DNA helicase, component of the general transcription and DNA repair factor IIH (TFIIH) core complex, which is involved in general and transcription-coupled nucleotide excision repair (NER) of damaged DNA and, when complexed to CAK, in RNA transcription by RNA polymerase II. In NER, TFIIH acts by opening DNA around the lesion to allow the excision of the damaged oligonucleotide and its replacement by a new DNA fragment. The ATPase activity of XPB/ERCC3, but not its helicase activity, is required for DNA opening. In transcription, TFIIH has an essential role in transcription initiation. When the pre-initiation complex (PIC) has been established, TFIIH is required for promoter opening and promoter escape. The ATP-dependent helicase activity of XPB/ERCC3 is required for promoter opening and promoter escape. Phosphorylation of the C-terminal tail (CTD) of the largest subunit of RNA polymerase II by the kinase module CAK controls the initiation of transcription.[UniProtKB/Swiss-Prot Function]