

## Product datasheet for **MR210632**

### **Ercc3 (NM\_133658) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Ercc3 (NM_133658) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Ercc3
Synonyms:	BTF2 p89; Ercc-3; XPB
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR210632 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGGCAAAGAGATCGAGTGGACCGCGACAAAAGAAATCCAAGAAGAGGCAGTATGAAGAGGAAGAGG  
 AAGACGAAGACGACATTCTGGGAACGAGTCTCAGGAGGCGGTGCCCTCCGCCGCTGGGAAACAGGTGGA  
 CGAGTCCAGCACAAAGTGGATGAGTATGGAGCAAAGGACTACAGACAGCAGATGCCACTAAAGGTGAC  
 CATACTCCAGGCCCTCTGGGTGGCTCCTGATGGCCACATTTTCTTGGAAAGCCTTCTCTCCAGTTTACA  
 AATATGCCAAGACTTCTGGTGGCAATTGCAGAGCCGGTGTGCCGGCCTACTCATGTACATGAATACAA  
 GCTAACCCCTACTCCCTCTATGCAGCGGTGAGTGTGGGCTGCAAACCAGTGACATTACTGAGTACCTC  
 AGAAGCTCAGTAAGACTGGAGTTCCTGATGGAATTATCCAGTTTATTAAGCTGTGCACTGTCAGCTATG  
 GGAAGTCAAGCTGGTCCCTCAAGCACACAGGTACTTTGTTGAAAGTTCCACCCCTGATGTTATCCAGCA  
 TCTTCTCAAGACCCAGTATCCGGGAATGTCGTTGAGGAACGCCGAGGGCCAGGCCACCGAACTCATC  
 ACAGAGACTTTTACAAGCAAATCTGCTATTTCTAAGACGGCGGCCGAAGGCAGTGGCGGGCTTCTACTT  
 CGCAGGGGTAGATGCACAGGCCAGTCTGACATACCCAAAGACCTGTTTGATTTTTATGAGCAAATGGA  
 CAAGGATGAGGAGGAGGAAGAGACACAGACAGTGTCTTTGAAGTTAAGCAGGAAATGATCGAGGAG  
 CTGCAGAAGCGCTGCATCTGCTTAGAGTACCCGCTGCTGGCAGAGTATGACTTCCGGAATGACACTCTCA  
 ATCCTGACATCAACATTGACCTGAAGCCACAGCCGTAAGTCTCAGACCCTATCAGGAGAAGAGCCTGCGGAA  
 GATGTTTGGGAACGACGACGACGCTCAGGAGTATTGTTCTTCCCTGTGGTGTGGGAAGTCCCTGGTC  
 GCGGTGACTGCCGATGCACTGTGAGAAAGCGTGTCTCGTCTGGGCAACTCGGCTGTGTCTGTGGAGC  
 AGTGGAAAAGCCAGTTTAAAGATGGTCAACCATCGATGACAGCCAGATCTGCCGCTTACCTCAGATGC  
 CAAGGACAAGCCATCGGCTGCTCCGTTGCCATTAGCACTTACTCTATGCTGGGCCACACCACAAAAGG  
 TCTGGGAAGCTGAGAGAGTCTGGAGTGGCTCAAACCCAGGAGTGGGGCTCATGATCCTTGACGAGG  
 TGCACACCATTCCAGCCAGGATGTTCCGGCGGTTCTGACTATTGTGACGGCGCACTGTAAGCTTGGTTT  
 GACTGCAACCCTGTCCGGGAAGATGACAAAATTGTTGACTTAAATTTCTGATTGGGCCAAGCTCTAT  
 GAAGCCAACTGGATGGAGCTGCAGAACAATGGGTACATCGCTAAAGTCCAGTGTGCTGAGGTTTGGTGCC  
 CGATGTCTCCCGAGTTCTACCGAGAGTATGTGGCAATCAAACAAAGAAACGGATCCTGTTGTACACCAT  
 GAATCCCAACAAATTCAGAGCCTGCCAGTTTCTGATCAAGTTTCATGAAAGGAGGAATGACAAGATTATT  
 GTCTTTGCTGACAACGTATTTGCCTTGAAGGAATATGCCATTCCGCTGAACAAACCTTATATCTACGGC  
 CCACGTCCAGGGAGAAGTATGCAGATTCTCCAGAACTCAAGCACAAACCCAAAATCAACACCATCTT  
 CATCTCCAAGTTGGTGACACATCCTTTGATCTGCCAGAAGCCAATGTCCTCATTAGATCTCTCCCAT  
 GGTGGCTCCCGACGGCAGGAAGCCAGAGACTGGGACGGTACTCAGAGCCAAGAAAGGGATGGTCGCAG  
 AGGAATACAATGCCTTTTCTACTCCCTGGTATCTCAGGACACACAGGAAATGGCTTATTCTACCAAGCG  
 ACAGAGATTCTAGTGGATCAAGTTACAGCTTAAAGTAATCACAAAGCTAGCTGGCATGGAGGAAGAG  
 GAGCTGGCGTTCTCCACCAAGAGGAGCAGCAGCAGCTCCTGCAGAAGGTGCTGGCAGCCACCGACTTGG  
 ATGCAGAGGAGGAAGTGGTGGCTGGAGAGTTTGGCTCTAGATCTGGCCAGGCATCCCGACGCTGTGGCAC  
 CATGAGCTCCCTGTCAGGCGCAGACGACACCGTGTACATGGAGTACCACTCCTCCCGAAGCAAGGCCCTCC  
 AGCAAGCACGTGCACCCGCTTTTCAAACGCTTCAGGAAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >MR210632 protein sequence  
Red=Cloning site Green=Tags(s)

MGKRDRVDRDKKKSKKRQYEEEEDEDDIPGNESQEAVPSAAGKQVDESSTKVDEYGAKDYRQQMPLKGD  
HTSRPLWVAPDGHIFLEAFSPVYKYAQDFLVAIAEPVCRPTHVHEYKLTAYSLYAAVSVGLQTSDI TEYL  
RKL SKTGVPDGI IQF IKLCTVSYGKVKLV LKHNR YFVESSH PDVIQHLLQDPVIRECLRNAEGEATELI  
TETFTSKSAISKTA AEGSGGPST SQGVDAQATSDIPKDLDFYEQMDKDEEEEEETQTVSFEVKQEMIEE  
LQKRCICLEYPLLA EYDFRNDTLNPDINIDLKPTAVLRPYQEKSLRKMFGNGRARS GVI V L P C G A G K S L V  
GVTAACTVRKRCLVLGNSAVSVEQWKAQFKMWSTIDDSQICRFTSDAKDKPIGCSVAISTYSMLGHHTTKR  
SWEAERVMEWLKTQEWGLMILDEVHTIPARMFRRVLTIVQAHCKLGLTATLVREDDKIVDLNFLIGPKLY  
EANWMELQNNGYIAKVQCAEVWCPMSPEFYREYVAIKTKKRILLYTMNPNKFRACQFLIKFHERRNDKII  
VFADNVFALKEYAIRLNKPYIYGPTSQGERMQILQNFKHNP KINTIFISKVGDTSFDLPEANVLIQISSH  
GGSRRQEAQRLGRVLR AKKGMVAEEYNAFFYSLVSQDTQEMAYSTKRQRFLVDQGY SFK VITKLAGMEEE  
ELAFSTKEEQQLLQKVL AATDLDAEEEVVAGEFGSRSGQASRRCGTMSL LSGADTVVMEYHSSRSKAS  
SKHVHPLFKRFRK

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:** Sgfl-Mlul

Cloning Scheme:



ACCN: NM\_133658

ORF Size: 2352 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\\_133658.2](#)

**RefSeq Size:** 2673 bp

**RefSeq ORF:** 2352 bp

**Locus ID:** 13872

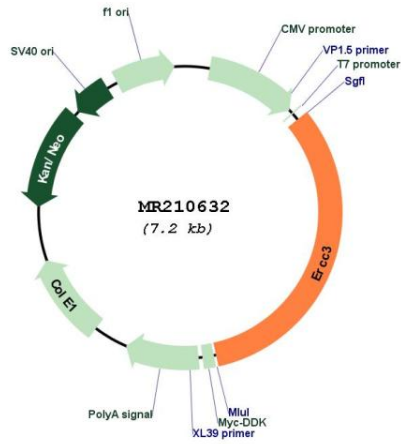
**UniProt ID:** [P49135](#)

**Cytogenetics:** 18 B1

**MW:** 89.1 kDa

**Gene Summary:** 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]

Product images:



Circular map for MR210632