

## Product datasheet for **MR226507**

### **Ercc2 (NM\_007949) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Ercc2 (NM_007949) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Ercc2
Synonyms:	AA407812; AU020867; AW240756; CXPB; Ercc-2; Mhdarco15; RCO015; XPD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR226507 representing NM\_007949  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAAGCTCAACGTGGACGGGCTGCTGGTCTACTTCCCCTACGACTACATCTACCCGGAGCAGTTCTCCT  
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 GGAGACACTACAGCGAATTGAGCAGATCGCACAGCAGCTC

**ACGCGT**ACGCGGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >MR226507 representing NM\_007949  
 Red=Cloning site Green=Tags(s)

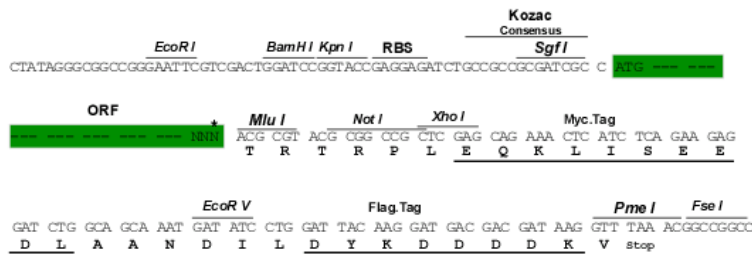
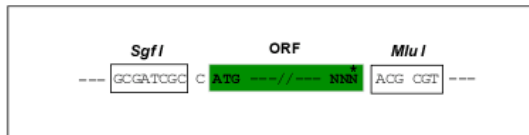
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 QESPPAFLSGLAQRVCIQRKPLRFAERLRSLLHTLEIADLADF SPLTLLANFATLVSTYAKGFTIIIEP  
 FDDRTPTIANPVLHFSMDASLAIKPVFERFQSVIITSGTSPLDIYPKILDFHPVTMATFTMTLARVCL  
 CPMIIGRNDQVAISSKFETREDIAVIRNYGNLLEMSAVVPDGI VAFFTSYQYMESTVASWYEQGILEN  
 IQRNKLLFIETQDGAETSVALEKYQEACENGRGAILLSVARGKVSEGIDFVHHYGRAVIMFGVPPVYTQS  
 RILKARLEYLRDQFQIRENDFLTFDAMRHAACVGRAIRGKTDYGLMVFADKRFARADKRGKLPRIWQEH  
 LTDSNLNLTVDEGVQVAKYFLRQMAQPFHREDQLGLSLLSLEQLQSEETLQRIEQIAQQQL

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



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

**ACCN:** NM\_007949

**ORF Size:** 2280 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\\_007949.5](#)

**RefSeq Size:** 3547 bp

**RefSeq ORF:** 2283 bp

**Locus ID:** 13871

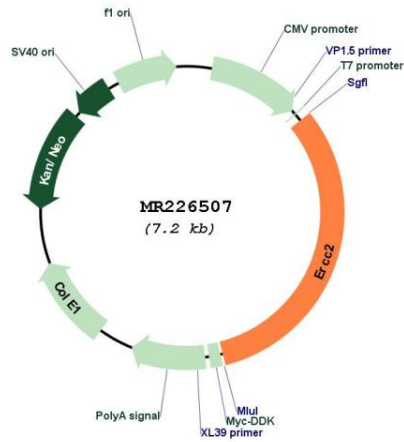
**UniProt ID:** [O08811](#)

**Cytogenetics:** 7 9.62 cM

**MW:** 87.3 kDa

**Gene Summary:** ATP-dependent 5'-3' 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 ATP-dependent helicase activity of XPD/ERCC2 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. 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. XPD/ERCC2 acts by forming a bridge between CAK and the core-TFIIH complex. Involved in the regulation of vitamin-D receptor activity. As part of the mitotic spindle-associated MMXD complex it plays a role in chromosome segregation. Might have a role in aging process and could play a causative role in the generation of skin cancers.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR226507