

## Product datasheet for **RC215058**

### **XPD (ERCC2) (NM\_000400) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	XPD (ERCC2) (NM_000400) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	XPD
Synonyms:	COFS2; EM9; TFIIH; TTD; TTD1; XPD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide  
Sequence:

>RC215058 representing NM\_000400  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAAGCTCAACGTGGACGGGCTCCTGGTCTACTTCCCCTACGACTACATCTACCCCGAGCAGTTCTCCT  
 ACATGCGGGAGCTCAAACGCACGCTGGACGCCAAGGGTCATGGAGTCTGGAGATGCCCTCAGGCACCGG  
 GAAGACAGTATCCCTGTTGGCCCTGATCATGGCATAACCAGAGAGCATATCCGCTGGAGGTGACCAAACCT  
 ATCTACTGCTCAAGAAGTGTGCCAGAGATTGAGAAGGTGATTGAAGAGCTTCGAAAGTTGCTCAACTTCT  
 ATGAGAAGCAGGAGGGCGAGAAGCTGCCGTTTCTGGGACTGGCTCTGAGCTCCCGCAAAACTTGTGTAT  
 TCACCCTGAGGTGACACCCTGCGCTTTGGGAAGGACGTCGATGGGAAATGCCACAGCCTCACAGCCTCC  
 TATGTGCGGGCGCAGTACCAGCATGACACCAGCCTGCCCACTGCCGATTCTATGAGGAATTTGATGCC  
 ATGGGCGTGAGGTGCCCTCCCCGCTGGCATCTACAACCTGGATGACCTGAAGGCCCTGGGGCGGCCA  
 GGGCTGGTGCCATACTTCTTGTCTGATACTCAATCCTGCATGCCAATGTGGTGGTTTATAGCTACCAC  
 TACCTCCTGGACCCCAAGATTGCAGACCTGGTGTCCAAGGAACTGGCCCCGAAGCCGCTCGTGGTCTTCG  
 ACGAGGCCCAACAATTGACAACGCTCTGCATCGACTCCATGAGCGTCAACCTCACCCGCCGACCCTTGA  
 CCGGTGCCAGGGCAACCTGGAGACCCTGCAGAAGACGGTCTCAGGATCAAAGAGACAGACGAGCAGCGC  
 CTGCGGGACGAGTACCGGCTCTGGTGGAGGGGCTGCGGGAGGCCAGCGCCGCCGGGAGACGGACGCC  
 ACCTGGCAACCCCGTCTGCCGACGAAGTCTGCAGGAGGCGTGCCTGGCTCCATCCGCACGGCCGA  
 GCATTTCTGGGCTTCTGAGGCGGCTGCTGGAGTACGTGAAGTGGCGGCTGCGTGTGCAGCATGTGGT  
 CAGGAGAGCCCGCCGCTTCTGAGCGGCTGGCCAGCGCGTGTGCATCCAGCGCAAGCCCTCAGAT  
 TCTGTCTGAACGCCTCCGGTCCCTGCTGCATACTCTGGAGATCACCGACCTTGTGACTTCTCCCGCT  
 CACCCTCCTTGCTAACTTTGCCACCCTTGTACGACCTACGCCAAAGGCTTACCACATCATATCGAGCCC  
 TTTGACGACAGAACCCCGACCATTGCCAACCCATCCTGCACTTACGCTGCATGGACGCCTCGTGGCCA  
 TCAAACCCGATTTGAGCGTTTCCAGTCTGTCATCATCACATCTGGGACACTGTCCCCGCTGGACATCTA  
 CCCAAGATCCTGGACTTCCACCCCGTACCATGGCAACCTTACCATGACGCTGGCACGGGTCTGCCTC  
 TGCCCTATGATCATCGGCCGTGGCAATGACCAGGTGGCCATCAGCTCAAATTTGAGACCCGGGAGGATA  
 TTGCTGTGATCCGGAATATGGAACTCCTGCTGGAGATGTCCGCTGTGGTCCCTGATGGCATCGTGGC  
 CTTCTTACCAGTACCAGTACATGGAGACACCGTGGCCTCCTGGTATGAGCAGGGGATCCTTGAGAAC  
 ATCCAGAGGAACAAGCTGCTCTTTATTGAGACCCAGGATGGTGGCGAAACCAAGTGTGCGCCTGGAGAAGT  
 ACCAGGAGGCCTGCGAGAATGGCCGCGGGGCCATCCTGCTGTGAGTGGCCGCGGGCAAAGTGTCCGAGGG  
 AATCGACTTTGTGCAACCACTACGGGCGGGCCGTATCATGTTTGGCGTCCCTACGCTCTACACACAGAGC  
 CGCATTCTCAAGGCGCGGCTGGAATACCTGCGGGACAGTTCAGATTCTGTGAGAATGACTTTCTTACCT  
 TCGATGCCATGCGCCACGCGGCCAGTGTGTGGTTCGGGCCATCAGGGGCAAGACGGACTACGGCCTCAT  
 GGTCTTTGCCGACAAGCGGTTTGCCTGGGGACAAGCGGGGAAAGTGGCCCGCTGGATCCAGGAGCAC  
 CTCACAGATGCCAACCTCAACCTGACCGTGGATGAGGGTGTCCAGGTGGCCAAGTACTTCTGCGGCAGA  
 TGGCACAGCCCTTCCACCGGGAGGATCAGCTGGGCTGTCCCTGCTCAGCCTGGAGCAGCTAGAATCAGA  
 GGAGACGCTGCAGAGGATAGAGCAGATTGCTCAGCAGTCTC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC215058 representing NM\_000400  
Red=Cloning site Green=Tags(s)

MKLNVDGLLVYFPYDIYPEQFSYMRELKRTLDAKGHVLEMPSTGKTVSLALIMAYQRAYPLEVTKL  
 IYCSRTVPEIEKVIIEELRKLNFYEKQEGEKL PFLGLALSSRNLCIHPEVTPFRFGKDVDGKCHSLTAS  
 YVRAQYQHDTSLPHCRFYEEFDAHGREVPLPAGIYNLDDLKALGRRQGWCPYFLARYSILHANVVVSYH  
 YLLDPKIADLVSKELARKAVVVFDEAHNIDNVCIDSMSVNLTRRTLDRQCQGNLETLQKTVLRKETDEQR  
 LRDEYRRLVEGLREASAARETDAHLANPVL PDEVLQEAVPGSIRTAEHFLGFLRRLLEYVKWRLRVQHVV  
 QESPPAFLSGLAQVCIQRKPLRFCAERLRSLLHTLEITDLADFSPLTLLANFATLVSTYAKGFTIIIEP  
 FDDRTPTIANPILHFSCMDASLAIKPVFERFQSVIITSGTSPLDIYPKILDFHPVTMATFTMTLARVCL  
 CPMIIGRGNDQVAISSKFETREDIAVIRNYGNLLEMSAVVPDGIVAFFTSYQYMESTVASWYEQGILEN  
 IQRNKLLFIETQDGAETSVALEKYQEACENGRGAILLSVARGKVSEGIDFVHHYGRAVIMFGVPPVYTQS  
 RILKARLEYLRDQFQIRENDFLTFDAMRHAACVGRAIRGKTDYGLMVFADKRFARGDKRGLPRWIQEH  
 LTDANLNLTVDEGVQVAKYFLRQMAQPFHREDQLGLSLLSLEQLESEETLQRIEQIAQQ

TRTRPLEQKLISEEDLANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6048\\_e09.zip](https://cdn.origene.com/chromatograms/mk6048_e09.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\_000400

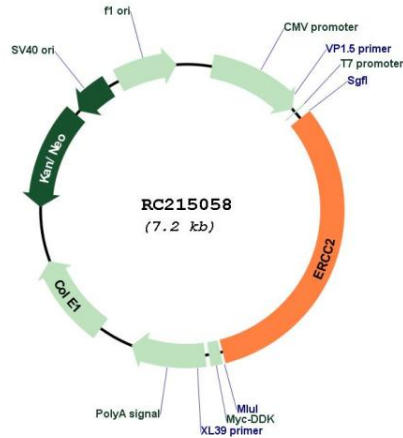
**ORF Size:** 2280 bp

**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](#)

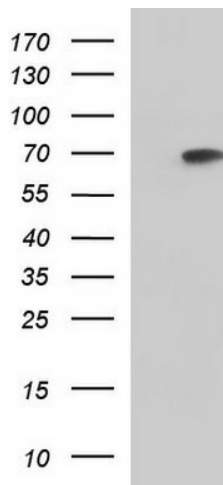
**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

<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_000400.4</a>
<b>RefSeq Size:</b>	2355 bp
<b>RefSeq ORF:</b>	2283 bp
<b>Locus ID:</b>	2068
<b>UniProt ID:</b>	<a href="#">P18074</a>
<b>Cytogenetics:</b>	19q13.32
<b>Domains:</b>	DEXDc2, HELICc2
<b>Protein Families:</b>	Druggable Genome, Transcription Factors
<b>Protein Pathways:</b>	Nucleotide excision repair
<b>MW:</b>	86.7 kDa
<b>Gene Summary:</b>	The nucleotide excision repair pathway is a mechanism to repair damage to DNA. The protein encoded by this gene is involved in transcription-coupled nucleotide excision repair and is an integral member of the basal transcription factor BTF2/TFIIH complex. The gene product has ATP-dependent DNA helicase activity and belongs to the RAD3/XPD subfamily of helicases. Defects in this gene can result in three different disorders, the cancer-prone syndrome xeroderma pigmentosum complementation group D, trichothiodystrophy, and Cockayne syndrome. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Aug 2008]

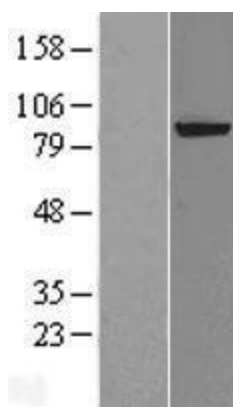
Product images:



Circular map for RC215058



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY ERCC2 (Cat# RC215058, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-ERCC2 (Cat# [TA590019]). Positive lysates [LY400141] (100ug) and [LC400141] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY400141]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC215058 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).