

## Product datasheet for **RC402014**

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

#### **Product data:**

|                                  |  |
|----------------------------------|--|
| <b>Product Type:</b>             | Mutant ORF Clones  |
| <b>Product Name:</b>             | XPD (ERCC2) (NM_000400) Human Mutant ORF Clone   |
| <b>Mutation Description:</b>     | G602D  |
| <b>Affected Codon#:</b>          | 602  |
| <b>Affected NT#:</b>             | 1805   |
| <b>Nucleotide Mutation:</b>      | ERCC2 Mutant (G602D), Myc-DDK-tagged ORF clone of Homo sapiens excision repair cross-complementing rodent repair deficiency, complementation group 2 (ERCC2), transcript variant 1 as transfection-ready DNA |
| <b>Effect:</b>                   | Xeroderma pigmentosum  |
| <b>Symbol:</b>                   | ERCC2  |
| <b>Synonyms:</b>                 | COFS2; EM9; TFIH; TTD; TTD1; XPD   |
| <b>E. coli Selection:</b>        | Kanamycin (25 ug/mL)   |
| <b>Mammalian Cell Selection:</b> | Neomycin   |
| <b>Vector:</b>                   | pCMV6-Entry (PS100001)   |
| <b>Tag:</b>                      | Myc-DDK  |
| <b>ACCN:</b>                     | NM_000400  |
| <b>ORF Size:</b>                 | 2280 bp  |
| <b>Restriction Sites:</b>        | Sgfl-MluI  |



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ORF Nucleotide  
Sequence:

>RC402014 representing NM\_000400  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGAAGCTCAACGTGGACGGGCTCTGGTCTACTTCCCGTACGACTACATCTACCCCGAGCAGTTCTCCT  
ACATGCGGGAGCTCAAACGCACGCTGGACGCCAAGGGTATGGAGTCTGGAGATGCCCTCAGGCACCGG  
GAAGACAGTATCCCTGTTGGCCCTGATCATGGCATACAGAGAGCATATCCGCTGGAGGTGACCAAACCT  
ATCTACTGCTCAAGAAGTGTGCCAGAGATTGAGAAGGTGATTGAAGAGCTTCGAAAGTTGCTCAACTTCT  
ATGAGAAGCAGGAGGGCGAGAAGCTGCCGTTTCTGGGACTGGCTCTGAGCTCCCGCAAAAATTGTGTAT  
TCACCTGAGGTGACACCCCTGCGCTTTGGGAAGGACGTCGATGGGAAATGCCACAGCCTCACAGCCTCC  
TATGTGCGGGCGCAGTACCAGCATGACACCAGCCTGCCCACTGCCGATTCTATGAGGAATTTGATGCC  
ATGGGCGTGAGGTGCCCTCCCGCTGGCATCTACAACCTGGATGACCTGAAGGCCCTGGGGCGGCCA  
GGGCTGGTGCCATACTTCTTGTCTGATACTCAATCCTGCATGCCAATGTGGTGGTTTATAGCTACCAC  
TACCTCCTGGACCCCAAGATTGCAGACCTGGTGTCCAAGGAACTGGCCCGCAAGGCCGTCGTGGTCTTCG  
ACGAGGCCACAACTTGACAACGTCTGCATCGACTCCATGAGCGTCAACCTCACCCGCCGACCCCTTGA  
CCGGTGCCAGGGCAACCTGGAGACCTGCAGAAGACGGTCTCAGGATCAAAGAGACAGACGAGCAGCGC  
CTGCGGGACGAGTACCGGCGTCTGGTGGAGGGGCTGCGGGAGGCCAGCGCCGCCCGGGAGACGGACGCC  
ACCTGGCAACCCCGTCTGCCGACGAAGTCTGCAGGAGGCGTCCCTGGCTCCATCCGCACGGCCGA  
GCATTTCTGGGCTTCTGAGGCGGCTGCTGGAGTACGTGAAGTGGCGGCTGCGTGTGACAGCATGTGGT  
CAGGAGAGCCCGCCCTTCTGAGCGGCTGGCCAGCGCGTGTGCATCCAGCGCAAGCCCTCAGAT  
TCTGTGCTGAACGCCTCCGGTCCCTGCTGATACTCTGGAGATCACCGACCTTGTGACTTCTCCCGCT  
CACCTCCTTGCTAACTTTGCCACCCTTGTGACACCTACGCCAAAGGCTTACCATCATCATCGAGCC  
TTTGACGACAGAACCCCGACCATTGCCAACCCATCCTGCACTTCAGCTGCATGGACGCCTCGTGGCCA  
TCAAACCCGATTTGAGCGTTTCCAGTCTGTCATCATCACATCTGGGACACTGTCCCGCTGGACATCTA  
CCCCAAGATCCTGGACTTCCACCCCGTACCATGGCAACCTTACCATGACGCTGGCACGGGTCTGCCTC  
TGCCCTATGATCATCGGCCGTGGCAATGACCAGGTGGCCATCAGCTCAAATTTGAGACCCGGGAGGATA  
TTGCTGTGATCCGGAATATGGGAACCTCCTGCTGGAGATGTCGCTGTGGTCCCTGATGGCATCGTGGC  
CTTCTTACCAGTACCAGTACATGGAGAGACCGTGGCTCCTGGTATGAGCAGGGGATCCTTGAGAAC  
ATCCAGAGGAACAAGCTGCTCTTTATTGAGACCAGGATGGTGGCGAAACAGTGTGCCCTGGAGAAGT  
ACCAGGAGGCCTGCGAGAATGGCCGCGGGGCCATCCTGCTGTCAGTGGCCCGGGACAAAGTGTCCGAGGG  
AATCGACTTTGTGACCACTACGGGCGGGCCGTATCATGTTTGGCGTCCCTACGTCTACACACAGAGC  
CGCATTCTCAAGGCGGGCTGGAATACCTGCGGGACAGTTCCAGATTCGTGAGAATGACTTTCTTACCT  
TCGATGCCATGCGCCACGCGGCCAGTGTGTGGTTCGGCCATCAGGGGCAAGACGGACTACGGCCTCAT  
GGTCTTTGCCGACAAGCGGTTTGCCTGGGGACAAGCGGGGAAGCTGCCCGCTGGATCCAGGAGCAC  
CTCACAGATGCCAACCTCAACCTGACCGTGGACGAGGGTGTCCAGGTGGCCAAGTACTTCTGCGGCAGA  
TGGCACAGCCCTTCCACCGGAGGATCAGCTGGCCTGTCCCTGCTCAGCCTGGAGCAGTAGAATCAGA  
GGAGACGCTGAAGAGGATAGAGCAGATTGCTCAGCAGCTC

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
TGGATTACAAGGATGACGACGA TAAGGTTTAA

**Protein Sequence:** >RC402014 representing NM\_000400  
 Red=Cloning site Green=Tags(s)

MKLNVDGLLVYFPYDIYPEQFSYMRELKRTLDAKGHVLEMPSTGKTVSLALIMAYQRAYPLEVTKL  
 IYCSRTYPEIEKVIEELRKLNFYEKQEGEKL PFLGLALSSRNLCIHPEVTPLRFGKDVGKCHSLTAS  
 YVRAQYQHDTSLPHCRFYEEFDAHGREVPLPAGIYNLDDLKALGRRQGWCPYFLARYSILHANVVVSYH  
 YLLDPKIALDLVSKELARKAVVVFDEAHNIDNVCIDSMSVNLTRRTLDRQCQGNLETLQKTVLRRIKETDEQR  
 LRDEYRRLVEGLREASAARETDAHLANPVL PDEVLQEAVPGSIRTAEHFLGFLRRLLEYVKWRLRVQHVV  
 QESPPAFLSGLAQRVCIQRKPLRFCAERLRSLLHLEITDLADFSPLTLLANFATLVSTYAKGFTIIIEP  
 FDDRTPTIANPILHFSCMDASLAIKPVFERFQSVIITSGLSPLDIYPKILDFHPVTMATFTMTLARVCL  
 CPMIIGRGNQVAISSKFETREDIAVIRNYGNLLEMSAVVPDGIVAFFTSYQYMESTVASWYEQGILEN  
 IQRNKLLFIETQDGAETSVALEKYQEACENGRGAILLSVARDKVSEGIDFVHHYGRAVIMFGVPYVYTQS  
 RILKARLEYLRDQFQIRENDFLTFDAMRHAAQCVGRAIRGKTDYGLMVFADKRFARGDKRGLPRWIQEH  
 LTDANLNLTVDEGVQVAKYFLRQMAQPFHREDQLGLSLLSLEQLESEETLKRIEQIAQQL

SGPTRRRLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



**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>RefSeq:</b>           | <u>NP_000391</u>   |
| <b>RefSeq Size:</b>      | 2280 bp  |
| <b>RefSeq ORF:</b>       | 2283 bp  |
| <b>Locus ID:</b>         | 2068   |
| <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>               | 83.6 kDa   |
| <b>Gene Summary:</b>     | <p>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]</p> |