

## Product datasheet for **RC402023**

### **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>	D673G
<b>Affected Codon#:</b>	673
<b>Affected NT#:</b>	2018
<b>Nucleotide Mutation:</b>	ERCC2 Mutant (D673G), 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>	Trihohiodysrophy
<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-Mlul



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ORF Nucleotide  
Sequence:

>RC402023 representing NM\_000400  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGAAGCTCAACGTGGACGGGCTCTGGTCTACTTCCCGTACGACTACATCTACCCCGAGCAGTTCTCCT  
ACATGCGGGAGCTCAAACGCACGCTGGACGCCAAGGGTATGGAGTCTGGAGATGCCCTCAGGCACCGG  
GAAGACAGTATCCCTGTTGGCCCTGATCATGGCATACAGAGAGCATATCCGCTGGAGGTGACCAAACCT  
ATCTACTGCTCAAGAAGTGTGCCAGAGATTGAGAAGGTGATTGAAGAGCTTCGAAAGTTGCTCAACTTCT  
ATGAGAAGCAGGAGGGCGAGAAGCTGCCGTTTCTGGGACTGGCTCTGAGCTCCCGCAAAAATTGTGTAT  
TCACCCGTAGGTGACACCCCTGCGCTTTGGGAAGGACGTCGATGGGAAATGCCACAGCCTCACAGCCTCC  
TATGTGCGGGCGCAGTACCAGCATGACACCAGCCTGCCCACTGCCGATTCTATGAGGAATTTGATGCC  
ATGGGCGTGAGGTGCCCTCCCGCTGGCATCTACAACCTGGATGACCTGAAGGCCCTGGGGCGGCCA  
GGGCTGGTGCCATACTTCTTGTCTGATACTCAATCCTGCATGCCAATGTGGTGGTTTATAGCTACCAC  
TACCTCCTGGACCCCAAGATTGCAGACCTGGTGTCCAAGGAACTGGCCCGCAAGGCCGTGTTGGTCTTCCG  
ACGAGGCCACAACTTGACAACGTCTGCATCGACTCCATGAGCGTCAACCTCACCCGCCGACCCCTTGA  
CCGGTGCCAGGGCAACCTGGAGACCTGCAGAAGACGGTCTCAGGATCAAAGAGACAGACGAGCAGCGC  
CTGCGGGACGAGTACCGCGCTGGTGGAGGGGCTGCGGGAGGCCAGCGCCGCCCGGGAGACGGACGCC  
ACCTGGCAACCCCGTCTGCCGACGAAGTCTGCAGGAGGACGTCCTGGCTCCATCCGCACGGCCGA  
GCATTTCTGGGCTTCTGAGGCGGCTGCTGGAGTACGTGAAGTGGCGGCTGCGTGTGACAGCATGTGGT  
CAGGAGAGCCCGCCCTTCTGAGCGGCTGGCCAGCGCGTGTGCATCCAGCGCAAGCCCTCAGAT  
TCTGTGCTGAACGCCTCCGGTCCCTGCTGATACTCTGGAGATCACCGACCTTGTGACTTCTCCCGCT  
CACCTCCTTGCTAACTTTGCCACCCTTGTGACACCTACGCCAAGGCTTACCATCATCATCGAGCC  
TTTGACGACAGAACCCCGACCATTGCCAACCCATCCTGCACTTCAGCTGCATGGACGCCTCGTGGCCA  
TCAAACCCGATTTGAGCGTTTCCAGTCTGTCATCATCACATCTGGGACACTGTCCCGCTGGACATCTA  
CCCAAGATCCTGGACTTCCACCCCGTACCATGGCAACCTTACCATGACGCTGGCACGGGTCTGCCTC  
TGCCCTATGATCATCGGCCGTGGCAATGACCAGGTGGCCATCAGCTCAAATTTGAGACCCGGGAGGATA  
TTGCTGTGATCCGGAATATGGGAACCTCCTGCTGGAGATGCCGCTGTTGGTCCCTGATGGCATCGTGGC  
CTTCTTACCAGTACCAGTACATGGAGAGACCGTGGCTCCTGGTATGAGCAGGGGATCCTTGAGAAC  
ATCCAGAGGAACAAGCTGCTCTTTATTGAGACCAGGATGGTGGCCAAACAGTGTGCCCTGGAGAAGT  
ACCAGGAGGCCTGCGAGAATGGCCGCGGGGCCATCCTGCTGTCAGTGGCCCGGGGCAAAGTGTCCGAGGG  
AATCGACTTTGTGACCACTACGGGCGGGCCGTATCATGTTTGGCGTCCCTACGTCTACACACAGAGC  
CGCATTCTCAAGGCGGGCTGGAATACCTGCGGGACAGTTCCAGATTCGTGAGAATGACTTTCTTACCT  
TCGATGCCATGCGCCACGCGGCCAGTGTGTTGGTTCGGCCATCAGGGGCAAGACGGGCTACGGCCTCAT  
GGTCTTTGCCGACAAGCGGTTTGCCTGGGGACAAGCGGGGAAGTGCCTCCGCTGGATCCAGGAGCAC  
CTCACAGATGCCAACCTCAACCTGACCGTGGACGAGGGTGTCCAGGTGGCCAAGTACTTCTGCGGCAGA  
TGGCACAGCCCTTCCACCGGGAGGATCAGCTGGCCTGTCCCTGCTCAGCCTGGAGCAGTAGAATCAGA  
GGAGACGCTGAAGAGGATAGAGCAGATTGCTCAGCAGCTC

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
TGGATTACAAGGATGACGACGA TAAGGTTTAA

**Protein Sequence:** >RC402023 representing NM\_000400  
 Red=Cloning site Green=Tags(s)

MKLNVDGLLVYFPYDIYPEQFSYMRELKRTLDAKGHVLEMPSTGKTVSLALIMAYQRAYPLEVTKL  
 IYCSRTVPEIEKVIEELRKLNFYEKQEGEKL PFLGLALSSRNLCIHPVTPLRFGKDVGKCHSLTAS  
 YVRAQYQHDTSLPHCRFYEEFDAHGREVPLPAGIYNLDDLKALGRRQGWCPYFLARYSILHANVVVSYH  
 YLLDPKIALDLVSKELARKAVVVFDEAHNIDNVCIDSMSVNLTRRTLDRQCQGNLETLQKTVLRIKETDEQR  
 LRDEYRRLVEGLREASAARETDAHLANPVL PDEVLQEAVPGSIRTAEHFLGFLRRLLEYVKWRLRVQHVV  
 QESPPAFLSGLAQRVCIQRKPLRFCAERLRSLLHLEITDLADF SPLTLLANFATLVSTYAKGFTIIIEP  
 FDDRTPTIANPILHFSCMDASLAIKPVFERFQSVIITSGLSPLDIYPKILDFHPVTMATFTMTLARVCL  
 CPMIIGRGNDQVAISSKFETREDIAVIRNYGNLLEMSAVVPDGIVAFFTSYQYMESTVASWYEQGILEN  
 IQRNKLLFIETQDGAETSVALEKYQEACENGRGAILLSVARGKVSEGIDFVHHYGRAVIMFGVPYVYTQS  
 RILKARLEYLRDQFQIRENDFLTFDAMRHAAQCVGRAIRGKTGYGLMVFADKRFARGDKRGLPRWIQEH  
 LTDANLNLTVDEGVQVAKYFLRQMAQPFHREDQLGLSLLSLEQLESEETLKRIEQIAQQQL

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>	<a href="#">NP_000391</a>
<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>