

Product datasheet for **RC402016**

XPD (ERCC2) (NM_000400) Human Mutant ORF Clone

Product data:

Product Type:	Mutant ORF Clones
Product Name:	XPD (ERCC2) (NM_000400) Human Mutant ORF Clone
Mutation Description:	R616W
Affected Codon#:	616
Affected NT#:	1846
Nucleotide Mutation:	ERCC2 Mutant (R616W), 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
Effect:	Xeroderma pigmentosum
Symbol:	ERCC2
Synonyms:	COFS2; EM9; TFIH; TTD; TTD1; XPD
E. coli Selection:	Kanamycin (25 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_000400
ORF Size:	2280 bp
Restriction Sites:	Sgfl-MluI



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ORF Nucleotide
Sequence:

>RC402016 representing NM_000400
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGAAGCTCAACGTGGACGGGCTCTGGTCTACTTCCCGTACGACTACATCTACCCCGAGCAGTTCTCCT
ACATGCGGGAGCTCAAACGCACGCTGGACGCCAAGGGTATGGAGTCTGGAGATGCCCTCAGGCACCGG
GAAGACAGTATCCCTGTTGGCCCTGATCATGGCATACAGAGAGCATATCCGCTGGAGGTGACCAAACCT
ATCTACTGCTCAAGAAGTGTGCCAGAGATTGAGAAGGTGATTGAAGAGCTTCGAAAGTTGCTCAACTTCT
ATGAGAAGCAGGAGGGCGAGAAGCTGCCGTTTCTGGGACTGGCTCTGAGCTCCCGCAAAAATTGTGTAT
TCACCTGAGGTGACACCCCTGCGCTTTGGGAAGGACGTCGATGGGAAATGCCACAGCCTCACAGCCTCC
TATGTGCGGGCGCAGTACCAGCATGACACCAGCCTGCCCACTGCCGATTCTATGAGGAATTTGATGCC
ATGGGCGTGAGGTGCCCTCCCGCTGGCATCTACAACCTGGATGACCTGAAGGCCCTGGGGCGGCCA
GGGCTGGTGCCATACTTCTTGTCTGATACTCAATCCTGCATGCCAATGTGGTGGTTTATAGCTACCAC
TACCTCCTGGACCCCAAGATTGCAGACCTGGTGTCCAAGGAAGTGGCCCGCAAGGCCGTCGTGGTCTTCG
ACGAGGCCACAACTTGACAACGTCTGCATCGACTCCATGAGCGTCAACCTCACCCGCCGACCCCTTGA
CCGGTGCCAGGGCAACCTGGAGACCTGCAGAAGACGGTCTCAGGATCAAAGAGACAGACGAGCAGCGC
CTGCGGGACGAGTACCGGCGTCTGGTGGAGGGGCTGCGGGAGGCCAGCGCCGCCCGGGAGACGGACGCC
ACCTGGCAACCCCGTCTGCCGACGAAGTCTGCAGGAGGCGTGCCTGGCTCCATCCGCACGGCCGA
GCATTTCTGGGCTTCTGAGGCGGCTGCTGGAGTACGTGAAGTGGCGGCTGCGTGTGACAGCATGTGGT
CAGGAGAGCCCGCCCTTCTGAGCGGCTGGCCAGCGCGTGTGCATCCAGCGCAAGCCCTCAGAT
TCTGTGCTGAACGCCTCCGGTCCCTGCTGATACTCTGGAGATCACCGACCTTGTGACTTCTCCCGCT
CACCTCCTTGCTAACTTTGCCACCCTTGTGACACCTACGCCAAGGCTTACCATCATCATCGAGCC
TTTGACGACAGAACCCCGACCATTGCCAACCCATCCTGCACTTCAGCTGCATGGACGCCTCGTGGCCA
TCAAACCCGATTTGAGCGTTTCCAGTCTGTCATCATCACATCTGGGACACTGTCCCGCTGGACATCTA
CCCCAAGATCCTGGACTTCCACCCCGTACCATGGCAACCTTACCATGACGCTGGCACGGGTCTGCCTC
TGCCCTATGATCATCGGCCGTGGCAATGACCAGGTGGCCATCAGCTCAAATTTGAGACCCGGGAGGATA
TTGCTGTGATCCGGAATATGGGAACCTCCTGCTGGAGATGTCGCTGTGGTCCCTGATGGCATCGTGGC
CTTCTTACCAGTACCAGTACATGGAGAGACCGTGGCTCCTGGTATGAGCAGGGGATCCTTGAGAAC
ATCCAGAGGAACAAGCTGCTCTTTATTGAGACCAGGATGGTGGCGAAACAGTGTGCCCTGGAGAAGT
ACCAGGAGGCCCTGCGAGAATGGCCGCGGGGCCATCCTGCTGTGAGTGGCCCGGGGCAAAGTGTCCGAGGG
AATCGACTTTGTGACCACTACGGTGGGCCGTATCATGTTTGGCGTCCCTACGTCTACACACAGAGC
CGCATTCTCAAGGCGCGGCTGGAATACCTGCGGGACAGTTCCAGATTCGTGAGAATGACTTTCTTACCT
TCGATGCCATGCGCCACGCGGCCAGTGTGTGGTTCGGCCATCAGGGGCAAGACGGACTACGGCCTCAT
GGTCTTTGCCGACAAGCGGTTTGCCTGGGGACAAGCGGGGAAGTGGCCCGCTGGATCCAGGAGCAC
CTCACAGATGCCAACCTCAACCTGACCGTGGACGAGGGTGTCCAGGTGGCCAAGTACTTCTGCGGCAGA
TGGCACAGCCCTTCCACCGGGAGGATCAGCTGGCCTGTCCCTGCTCAGCCTGGAGCAGCTAGAATCAGA
GGAGACGCTGAAGAGGATAGAGCAGATTGCTCAGCAGCTC

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGA TAAGGTTTAA

Protein Sequence: >RC402016 representing NM_000400
 Red=Cloning site Green=Tags(s)

MKLNVDGLLVYFPYDIYPEQFSYMRELKRTLDAKGHVLEMPSTGKTVSLALIMAYQRAYPLEVTKL
 IYCSRTVPEIEKVIEELRKLNFYEKQEGEKL PFLGLALSSRNLCIHPEVTP LRF GKDV D GKCHSLTAS
 YVRAQYQHDTSLPHCRFYEEFDAHGREVPLPAGIYNLDDLKALGRRQGWCPYFLARYSILHANVVVSYH
 YLLDPKIALVSKELARKAVVVFDEAHNIDNVCIDSMSVNL TRRTLDR CQGNLETLQKT VLR IKETDEQR
 LRDEYRRLVEGLREASAARETDAHLANPVL PDEVLQEAVPGSIRTAEHFLGFLRRLLEYVKWRLRVQHVV
 QESPPAFLSGLAQRVCIQRKPLRFCAERLRSLLHLEITDLADFSPLTLLANFATLVSTYAKGFTIIIEP
 FDDRTPTIANPILHFSCMDASLAIKPVFERFQSVIITSGLSPLDIYPKILDFHPVTMATFTMTLARVCL
 CPMIIGRGNDQVAISSKFETREDIAVIRNYGNLLEMSAVVPDGIVAFFTSYQYMESTVASWYEQGILEN
 IQRNKLLFIETQDGAETSVALEKYQEACENGRGAILLSVARGKVSEGIDFVHHYGWAVIMFGVPYVYTQS
 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.

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).
RefSeq:	<u>NP_000391</u>
RefSeq Size:	2280 bp
RefSeq ORF:	2283 bp
Locus ID:	2068
Cytogenetics:	19q13.32
Domains:	DEXDc2, HELICc2
Protein Families:	Druggable Genome, Transcription Factors
Protein Pathways:	Nucleotide excision repair
MW:	83.6 kDa
Gene Summary:	<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>