OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for MG210391

Ercc2 (BC034517) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ercc2 (BC034517) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Ercc2
Synonyms:	AA407812; AU020867; AW240756; CXPD; Ercc-2; Mhdarco15; RCO015; XPD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

View online »

ORF Nucleotide Sequence:

>MG210391 representing BC034517
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAAGCTCAACGTGGACGGGCTGCTGGTCTACTTCCCGTACGACTACATCTACCCGGAGCAGTTCTCCT
ACATGCTGGAGCTCAAGCGCACGCTGGACGCCAAGGGTCATGGAGTCCTGGAGATGCCCTCGGGCACTGG
GAAGACAGTGTCCCTATTGGCCCTGATTGTGGCCTATCAGCGGGTCATAGAAGAGCTTCGTAAGCTACTC
AGCTTCTACGAGCAGCAGGAGGGCGAGAAGCTGCCGTTCTTAGGACTGGCTCTGAGCTCAAGAAAGAACC
TGTGCATTCATCCCGAGGTGACTCCACTGCGCTTTGGGAAGGATGTTGATGGGAAGTGTCACAGCCTAAC
GGCGTCGTATGTGCGGGCACAGTACCAGCAGGATGCCAGCCTGCCTCACTGCCGCTTCTATGAGGAATTT
GACATCCATGGACGCCAGATGCCGCTCCCTGCGGGCATCTACAACCTGGATGACCTGAAGGCCCTAGGGC
ATCGCCAGGGCTGGTGCCCCTACTTCCTGGCTCGATACTCGATCCTGCATGCCAACGTGGTGGTTTACAG
CTACCACTACCTCCTGGACCCCAAGATCGCAGACCTGGTATCCAAAGAGCTGGCTCGCAAGGCTGTTGTG
GTCTTCGATGAAGCTCACAACATCGACAATGTCTGCATTGACTCCATGAGTGTCAACCTCACCCGCAGGA
CTCTGGACCGTTGCCAGAGCAACTTAGACACCCTACAGAAGACCGTGCTCAGGATCAAGGAGACGGATGA
GCAGCGGCTGCGGGATGAGTACCGGCGCCTGGTGGAGGGCCTGCGGGAGGCCAGTGTGGCCCGGGAGACA
GATGCCCACCTGGCCAACCCTGTGCTGCCGGACGAGGTGCTGCAGGAGGCTGTGCCTGGCTCCATCCGTA
CGGCTGAGCACTTCCTGGGCTTTCTGCGGCGGCTGCTGGAGTATGTCAAGTGGCGTCTGCGCGTGCAGCA
TGTGGTGCAGGAGAGTCCACCTGCCTTTCTGAGCGGCCTGGCCCAGCGGGTGTGCATCCAGCGCAAGCCC
CTCAGGTTCTGTGCTGAACGCCTGCGCTCCCTGCTGCACACCCTGGAGATTGCCGACCTGGCCGACTTCT
CCCCGCTCACACTCCTTGCTAACTTCGCCACTCTCGTCAGCACTTACGCCAAGGGCTTCACCATTATCAT
TGAGCCCTTTGACGACAGGACCCCCACCATCGCCAACCCCGTTCTGCACTTCAGCTGTATGGACGCCTCC
TTGGCCATCAAGCCTGTGTTTGAGCGCTTCCAGTCTGTCATCATCACTTCTGGGACACTGTCCCCACTGG
ACATCTACCCCAAGATCCTGGACTTCCACCCTGTCACAATGGCAACCTTCACCATGACGCTGGCCCGAGT
CTGCCTCTGCCCGATGATCATTGGCCGTGGTAATGACCAGGTAGCAATCAGCTCCAAATTTGAGACCAGA
GAAGATATTGCTGTGATCCGAAACTATGGCAACCTCCTGCTGGAGATGTCCGCCGTGGTCCCAGATGGCA
TTGTGGCCTTCTTTACCAGCTACCAGTACATGGAAAGCACCGTGGCCTCCTGGTATGAGCAGGGCATCCT
TGAGAACATCCAGAGGAACAAACTGCTCTTCATTGAGACCCAGGATGGGGCTGAGACCAGTGTGGCCCTG
GAGAAGTACCAAGAGGCATGCGAGAATGGCCGTGGGGCCATTCTGCTCTCAGTGGCTCGGGGCAAAGTAT
CAGAAGGGATTGACTTTGTACACCACTACGGACGGGCTGTGATCATGTTTGGAGTTCCCTATGTCTATAC
CCAGAGCCGAATTCTCAAGGCCCGGCTAGAGTATCTGCGGGACCAGTTCCAGATCCGAGAGAACGACTTC
CTCACCTTTGATGCTATGCGCCATGCAGCCCAGTGTGTGGGTCGTGCCATCAGGGGCAAGACGGACTATG
GACTCATGGTCTTTGCTGACAAGCGGTTTGCTCGGGCGGACAAGCGTGGTAAGCTGCCTCGCTGGATCCA
GGAGCACCTGACCGACTCCAACCTCAACCTGACCGTGGATGAGGGTGTACAGGTCGCCAAGTACTTCCTG
CGGCAGATGGCGCAGCCCTTCCACCGGGAGGATCAGCTGGGCCTGTCGCTGCTCAGCCTGGAGCAGCTGC
AGTCAGAGGAGACACTACAGCGAATTGAGCAGATCGCACAGCAGCTC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

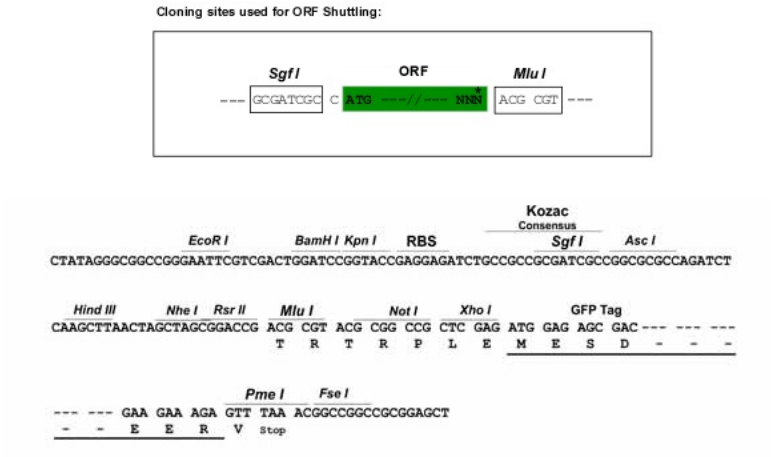
>MG210391 representing BC034517
Red=Cloning site Green=Tags(s)

MKLNVDGLLVYFPYDYIYPEQFSYMLELKRTLDAKGHGVLEMPSGTGKTVSLLALIVAYQRVIEELRKLL
SFYEQQEGEKLPFLGLALSSRKNLCIHPEVTPLRFGKDVDGKCHSLTASYVRAQYQQDASLPHCRFYEEF
DIHGRQMPLPAGIYNLDDLKALGHRQGWCPYFLARYSILHANVVVYSYHYLLDPKIADLVSKELARKAVV
VFDEAHNIDNVCIDSMSVNLTRRTLDRCQSNLDTLQKTVLRIKETDEQRLRDEYRRLVEGLREASVARET
DAHLANPVLPDEVLQEAVPGSIRTAEHFLGFLRRLLEYVKWRLRVQHVVQESPPAFLSGLAQRVCIQRKP
LRFCAERLRSLLHTLEIADLADFSPLTLLANFATLVSTYAKGFTIIIEPFDDRTPTIANPVLHFSCMDAS
LAIKPVFERFQSVIITSGTLSPLDIYPKILDFHPVTMATFTMTLARVCLCPMIIGRGNDQVAISSKFETR
EDIAVIRNYGNLLLEMSAVVPDGIVAFFTSYQYMESTVASWYEQGILENIQRNKLLFIETQDGAETSVAL
EKYQEACENGRGAILLSVARGKVSEGIDFVHHYGRAVIMFGVPYVYTQSRILKARLEYLRDQFQIRENDF
LTFDAMRHAAQCVGRAIRGKTDYGLMVFADKRFARADKRGKLPRWIQEHLTDSNLNLTVDEGVQVAKYFL
RQMAQPFHREDQLGLSLLSLEQLQSEETLQRIEQIAQQL

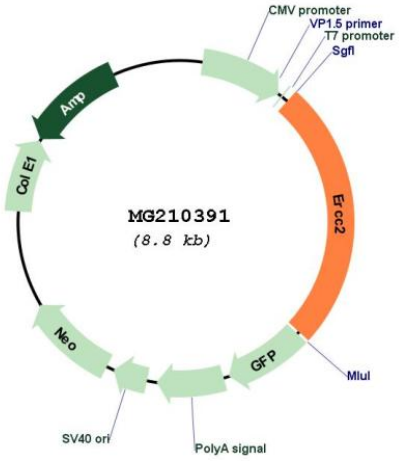
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:	BC034517
ORF Size:	2219 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:	BC034517, AAH34517
RefSeq Size:	3500 bp
RefSeq ORF:	2219 bp
Locus ID:	13871

Cytogenetics:	7 9.62 cM
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]