

Product datasheet for **RG210649**

Ku80 (XRCC5) (NM_021141) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ku80 (XRCC5) (NM_021141) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Ku80
Synonyms:	KARP-1; KARP1; KU80; Ku86; KUB2; NFIV
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG210649 representing NM_021141
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGTGC GGTCGGGGAATAAGGCAGCTGTTGTGCTGTGTATGGACGTGGGCTTTACCATGAGTAACTCCA
 TTCCTGGTATAGAATCCCATTTGAACAAGCAAAGAAGGTGATAACCATGTTTGTACAGCGACAGGTGTT
 TGCTGAGAACAAGGATGAGATTGCTTTAGTCTGTTTGGTACAGATGGCACTGACAAATCCCCTTTCTGGT
 GGGGATCAGTATCAGAACATCACAGTGCACAGACATCTGATGCTACCAGATTTTGATTTGCTGGAGGACA
 TTGAAAGCAAAATCCAACCAGGTTCTCAACAGGCTGACTTCTGGATGCACTAATCGTGAGCATGGATGT
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 TGTTGTCCAGGATGGAATTACTCTGATCACCAAGAGGAAGCCTCTGGAAGTTCTGTACAGCTGAGGAA
 GCCAAAAGTTTTCTGGCCCCAAAGACAAACCAAGTGGAGACACAGCAGCTGATTTGAAGAAGGTGGTG
 ATGTGGACGATTTATTGGACATGATA

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence: >RG210649 representing NM_021141
Red=Cloning site Green=Tags(s)

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MVRSGNKAAVVLCMDVGFMTSINSIPGIESPFQAKKVITMFVQRQVFAENKDEIALVLFGTGDTNPLSG
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RFSKSQLDIIHSLKKCDISLQFFLPFLGKEDGSGDRDGPFRLLGGHGPSFPLKGITQQKEGLEIVKM
VMISLEGEDGLDEIYSFSESLRKLKCVFKKIERHSIHWPCRLTIGSNLSIRIAAYKSILQERVKKTWTVVD
AKTLKKEDIQKETVYCLNDDDETEVLKEDIIQGFYRGSDIVPFSKVDEEQMKYKSEGKCFSVLGFCKSSQ
VQRRFFMGNQVLKVAARDDEAAVALSSLIHALLDDLMVAIVRYAYDKRANPQVGVAFPHIKHNYECLV
YVQLPFMEDLRQYMFSSLKNSKKYAPTEAQLNAVDALIDSMSLAKKDEKTDLTLEDLFPPTKIPNPRFQRL
FQCLLHRALHPREPLPPIQQHIWNMLNPPAEVTTKSQIPLSKIKTLFPLIEAKKKDQVTAQEIFQDNHED
GPTAKKLTKEQGGAHFSVSSLAEGSVTSVGSVNPANFRVLVKQKASFEESNQLINHIEQFLDNETP
YFMKSIDCIRAFREEAIKFSEEQRFNFLKALQEKVEIKQLNHFWIIVVQDGITLITKEEASGSSVTAEE
AKKFLAPKDKPSGDTAAVFEEGDVEDLLDMI
```

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_021141

ORF Size: 2196 bp

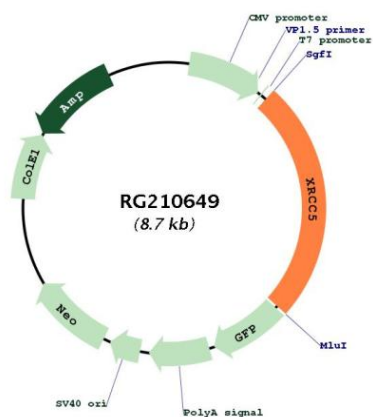
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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:	<ol style="list-style-type: none">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:	NM_021141.2 , NP_066964.1
RefSeq Size:	3310 bp
RefSeq ORF:	2199 bp
Locus ID:	7520
UniProt ID:	P13010
Cytogenetics:	2q35
Domains:	VWA, Ku_C, Ku_N, ku
Protein Families:	Druggable Genome, Stem cell - Pluripotency
Protein Pathways:	Non-homologous end-joining
Gene Summary:	<p>The protein encoded by this gene is the 80-kilodalton subunit of the Ku heterodimer protein which is also known as ATP-dependant DNA helicase II or DNA repair protein XRCC5. Ku is the DNA-binding component of the DNA-dependent protein kinase, and it functions together with the DNA ligase IV-XRCC4 complex in the repair of DNA double-strand break by non-homologous end joining and the completion of V(D)J recombination events. This gene functionally complements Chinese hamster xrs-6, a mutant defective in DNA double-strand break repair and in ability to undergo V(D)J recombination. A rare microsatellite polymorphism in this gene is associated with cancer in patients of varying radiosensitivity. [provided by RefSeq, Jul 2008]</p>

Product images:



Circular map for RG210649