

## Product datasheet for RC211950

### E2 230K (UBE2O) (NM\_022066) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	E2 230K (UBE2O) (NM_022066) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	UBE2O
Synonyms:	E2-230K
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RC211950 representing NM_022066 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCGGATCCCGCAGCCCCACGCCCGCAGCTCCCGCTCCAGCCAGGCCCGGCTCCAGCCCCGAGG  
CAGTCCCGGCCAGCCGAGCCCCGTCCCGGCCCGGCCCGCCCTCGGACTCGGCCCTCCGGGCCGT  
CTCGGACTCCGGCCAGAAGCCGGCTCGCAGCGCTGCTGTTTTCTCACGACCTGGTGTCCGGCCGTAC  
CGTGGCTCCGTGCACTTCGGGCTGGTGCCTCATCCACGGCAGGACTCGGACTCGGAGGGCGAGGAGG  
AGGGCCCGCGGAGCTCGGGGTGCTCCGAGGCCGGGGCGCGGGCCACGAGGAGGGCCGGCCAGCCCCCT  
GCGCCCGGGTACGTGCGCTCCAGTGGTACCCGGAGGGCGTCAAGCAGCATGTGAAGGAGACCAAGCTG  
AACTAGAGGACCGTTCTGTGGTCCCGGAGATGTGGTCCGGCACATGCGATCCACCGACAGTCAAGTGTG  
GCACGGTATCGACGTCACATCGACTGTGCCGTCAAGCTCATCGGCACCAACTGCATCATCTATCCCGT  
CAACAGCAAGGACCTGCAGCACATCTGGCCCTCATGTATGGGGACTACATTGCCTATGACTGCTGGCTG  
GGGAAGTCTACGACTTGAAGAACCAGATCATCCTGAAGCTATCCAACGGCGCCAGGTGCCATGAACA  
CGGAAGATGGCGCAAGCTCTACGACGCTGCCCGCAGTCAGCGACTCGGGTCTCTTCGATGATTCT  
CTATGGCTTCTACCCAGGCCAGGTGCTCATTGGCCCTGCCAAGATCTTCTCCAGCGTCCAGTGGCTGTCA  
GGTGTCAAGCCCGTGTCTAGCACCAAGACAAGTTCCGAGTGGTGGTGAAGAGGTGCAGGTTGTAGAGT  
TGAAAGTTACATGGATTACCAAGAGTTTCTGTCCAGGGGCGACGGACAGCGTCCAGCCCCACCCTCTGT  
CATCACCCAGGAAAACCTAGGCAGGGTGAAGCGTCTCGGATGCTTTGACCATGCTCAGCGGCAGCTTGGG  
GAGCGTGTCTGTATGTCTCCAGCCAAGGTAGAGCCAGCCAAGATTGCCTGGGAATGTCCAGAAAAA  
ACTGCGCCAGGGGGAGGGCTCTATGGCCAAGAAGGTGAAGCGCCTGTTGAAGAAGCAGGTTGTGCGGAT  
CATGTCTGCTCCCGACACCCAGTGTCCCGGACCATTCCATGGAAGACCCAGACAAGAAGGGGGAA  
TCCAAAACCAAGAGCGAAGCGGAGTCTGCCAGCCCTGAGGAGACGCCCGATGGCTCTGCCAGTCCAGTGG  
AGATGCAGGACGAGGGTGCAGAGGAGCCCCACGAGGCAGGAGAGCAGCTGCCCCATTCTGCTAAAAGA  
AGGCAGAGATGACAGGCTGCACTCGGCAGAGCAGGACGCAGATGATGAGGCTGCTGATGACACGGACGAC  
ACCAGTTCGGTGACCTCTCTGCCAGCTCCACCACTTCTCCAGAGCGGCAGCGGCACGAGTCCGAAAA



[View online >](#)

AGAGCATCCCCTTGCCATCAAGAACTTAAAGCGCAAACACAAGAGGAAGAAGAATAAAATCACTCGAGA  
CTTCAAGCCAGGGGACAGGGTGGCAGTGGAGGTGGTGACCACGATGACCTCAGCCGACGTGATGTGGCAG  
GATGGCTCCGTGGAATGCAACATCCGCTCCAACGACCTTTCCTGTGCACCACCTGGACAACAACGAGT  
TCTGCCCTGGAGACTTCTGGTGTAGATAAGCGAGTCCAGAGCTGTCCAGACCCTGCTGTCTACGGTGTGGT  
ACAGTCTGGGGACCACATCGGCCGTACCTGCATGGTGAAGTGGTCAAGCTGAGGCCGAGTGGGGACGAC  
GTGGAGCTGATTGGAGAAGAGGAAGATGTGAGTGTTCACGACATTGCTGACCACCCTGACTTTAGGTTCC  
GTACAACGTGACATCGTCAATCCGATCGGCAATACTGAGGATGGGGCTCCTCACAAGGAGGATGAGCCATC  
GGTGGCCAGGTGGCCCGTGTGGACGTACGACAGCAAGGTGGAGGTGGTGTGGGCTGACAACCTCAAAGACC  
ATCATCTGCCCCAGCACTTGTACAACATAGAGTCTGAGATTGAGGAGTCAAGTACGATTCCGGTAGAAG  
GCAGCACCAGCGGGGCATCCTCGGATGAATGGGAAGATGATAGTGACAGCTGGGAGACGGACAATGGGCT  
GGTGGAGGACGAGCACCACAAGATAGAGGAGCCCCCATCCACCCTGGAGCAGCCGGTGGCCCTGAG  
GACAAGGGAGTGGTGTGATCAGTGAAGAGGACCCACAGCTGCCGTCCAGGGGGCTGTGGCCATGGCTGCC  
CCATGGCCGGGCTGATGGAGAAGGCTGGCAAGGACGGGCCACCAAGAGCTTCCGGGAGTTGAAAGAGGC  
CATCAAGATCCTGGAGAGCCTCAAGAACATGACTGTGGAGCAGCTGCTGACGGGCTCGCCACCTCTCCG  
ACTGTGGAGCCTGAGAAGCCAACCTCGGGAGAAGAAGTTTCTGGATGACATCAAGAAGCTACAGGAAAACC  
TCAAGAAGACCCTGGACAATGTGGCCATTGTAGAGGAGGAGAAGATGGAAGCAGTGCCCGACGTAGAGCG  
CAAGGAGGACAAGCCCGAGGGGACGTCACCTGTGAAGGCTGAGTGGCCCAGCGAAACCCCGGTGCTGTGC  
CAGCAGTGTGGCGGAAGCCTGGCGTCACTTCCACAGCGCAAGGGCGAGGTCTTCTCCGTAAGTGGAGT  
TTGACCCCTCAAATCATTTCTTTAAGAAAATTGAGTTCACGCCTCCAGAAGCCAAGAAGTTCTTCAGCAC  
AGTGGGAAGGAGATGGCGTGTGGCTACCTCACTGCCTGAGGGCATCATGGTCAAGACTTTTGAAGAT  
AGAATGGACCTCTTCTCAGCTCTCATCAAGGGCCCCACTCGAACCCCTACGAGGATGGCCTCTACTTGT  
TTGACATCCAGCTCCCCAACATCTACCCAGCCGTGCCCCCCTCTGCTACCTCTCCCAATGCAGTGG  
CCGCTGAACCCCAACCTGTATGACAATGGGAAGGTGTGTGTGAGCCTCCTGGGCACCTGGATTGGAAAG  
GGGACAGAGAGGTGGACAAGCAAGTCCAGCCTTCTCCAGGTGCTCATCTCCATCCAAGGTCTGATCCTGG  
TAAATGAACCATACTACAACGAAGCCGGCTTCGACAGTGACCGAGGCTGCAGGAAGGCTATGAAAACAG  
TCGCTGTTACAATGAGATGGCGTGTATCCGCGTGGTGCAGTCCATGACCCAGCTGGTGGCGGCGCCCCC  
GAGGTCTTTGAGCAGGAGATCAGGCAACACTTTAGCACTGGTGGCTGGCGGCTGGTGAACCGTATCGAGT  
CCTGGCTGGAAACCCATGCCCTGCTGGAGAAGGCCAGGCACTGCCAACGGGTGCCAAGGCCAGCAG  
CTCGCCAGAGCCCCAGCTGTAGCCGAGCTGTGAGTCCGGCCAACAAGAACCTGAGGATGGAGGGCCA  
GCCCCAGGAGAGGCTCCAGGGCTCAGACTCAGAGGGCGGTGCCAGGGCTGGCCTCAGCTAGCAGGG  
ACCACACAGACCAGACTTCGGAGACCGCACCAGACGCATCGGTGCCACCCAGTGTGAAACCAAGAAGCG  
GAGAAAGAGCTACCGGAGCTTCTACCTGAGAAGAGTGGCTACCTGACATCGGCTTCCCCCTTCCCCA  
CTTTCAAAGGTTTCATCAAGAGCATCCGGGTGTCTGACGCAGTTCGGGGCTGCCCTGCTAGAGGCAG  
GCATGCCGGAGTGACAGAGGACAAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC211950 representing NM\_022066  
 Red=Cloning site Green=Tags(s)

MADPAAPTPAAPAPAQAPAPAPEAVPAPAAAPVPAPAPASDSASGPPSSDSGPEAGSQRLLFSHDLVSGRY  
 RGSVHFGLVRLIHGEDSDSEGEEEGRGSSGCSEAGGAGHEEGRASPLRRGYVVRVQWYPEGVKQHVKETKL  
 KLEDRSVVPRDVVRHMRSTDSQCGTVIDVNIIDCAVKLIGTNCIIYPVNSKDLQHIWPFMYGDYIAYDCWL  
 GKVYDLKNQIILKLSNGARCSMNTEDGAKLYDVCPhVSDSGLFFDSDYGFYPGQVLIQPAKIFSSVQWLS  
 GVKPVLSTKSKFRVVVEEVQVVVVKVTWITKSF CPGGTDVSPPPSVITQENLGRVKRLGCFDHAQRQLG  
 ERCLYVFPKVEPAKIAWECPEKNCAQEGGSMKVKRLLKQVVRIMSCSPDTQCSRDHMEDPDKKGE  
 SKTKSEAESASPEETPDGSASPVEMQDEGAEEPHEAGEQLPPFLLKEGRDRLHSAEQDADDEAADDTDD  
 TSSVTSSASSTSSQSGSGTSRKKSIPLSIKNLKRKHKKKNI TRDFKPGDRVAEVVTTMSADVMWQ  
 DGSVECNIRSNDLFPVHHLDNNEFCPGDFVVDKRVQSCPDAVYGVVQSGDHIGRTCMVKWFKLRPSGDD  
 VELIGEEEDVSVYDIADHPDFRRTT DIVIRIGNTEDGAPHKEDPSVGQVARVDVSSKVEVVWADNSKT  
 IILPQHLNYIESEIEESDYDSVEGSTSGASSDEWEDSDSWETDNLVEDEHPKIEEPIPPLEQVPAE  
 DKGVVISEEAATAAVQGA VAMAAPMAGLMEKAGKDGPCKSFRELKEAIKILESLKNMTVEQLL TGSPTSP  
 TVEPEKPTREKFLDDIKKLQENLKKTLDNVAIVEEEKMEAVPDVERKEDKPEGQSPVKAEPSETPVLC  
 QQCGGKPGVTFTSAKGEVFSVLEFAPSNSHFKIEFQPPEAKKFFSTVRKEMALLATSLPEGIMVKTFED  
 RMDLFSALIKGPTRPYEDGLYLFDIQLPNIYPVPPHFCYLSQCSGRLNPNLYDNGKVCVSLLTGTWIGK  
 GTERWTSKSSLLQVLSIQGLILVNEPYNEAGFDSRGLQEGYENSRCYNEMALIRVVQSMQTVRRPP  
 EVFQEIRQHFSTGGWRLVNRIESWLETHALLEKAQALPNGVPKASSPEPPAVAE LSDSGQQEPEDGGP  
 APGEASQGSDEGGAQGLASASRDHTDQTSETAPDASVPPSVKPKKRRKSYRSFLPEKSGYPDIGFLPFLP  
 LSKGFIKSIRGVLTFRAALLEAGMPECTEDK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

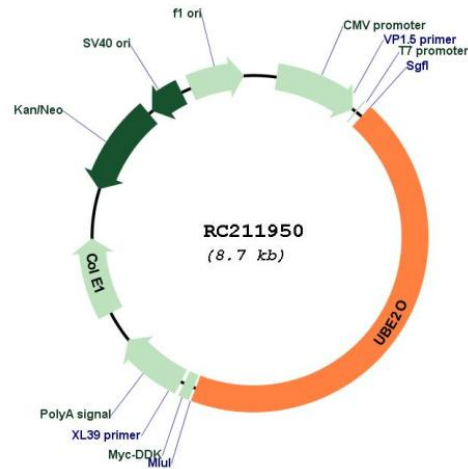
**Chromatograms:** [https://cdn.origene.com/chromatograms/mk8026\\_e09.zip](https://cdn.origene.com/chromatograms/mk8026_e09.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



## Plasmid Map:



ACCN: NM\_022066

ORF Size: 3876 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: [NM\\_022066.4](#)

RefSeq Size: 5073 bp

RefSeq ORF: 3879 bp

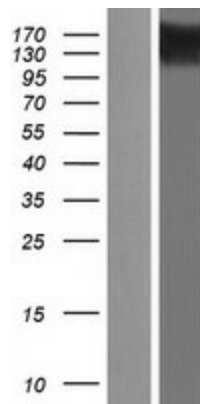
Locus ID: 63893

UniProt ID: [Q9C0C9](#)

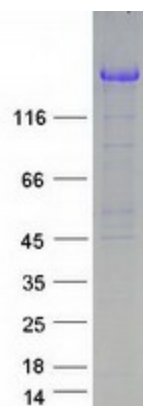
Cytogenetics: 17q25.1

<b>Domains:</b>	UBCc
<b>Protein Pathways:</b>	Ubiquitin mediated proteolysis
<b>MW:</b>	141.1 kDa
<b>Gene Summary:</b>	<p>E2/E3 hybrid ubiquitin-protein ligase that displays both E2 and E3 ligase activities and mediates monoubiquitination of target proteins (PubMed:23455153, PubMed:24703950). Negatively regulates TRAF6-mediated NF-kappa-B activation independently of its E2 activity (PubMed:23381138). Acts as a positive regulator of BMP7 signaling by mediating monoubiquitination of SMAD6, thereby regulating adipogenesis (PubMed:23455153). Mediates monoubiquitination at different sites of the nuclear localization signal (NLS) of BAP1, leading to cytoplasmic retention of BAP1. Also able to monoubiquitinate the NLS of other chromatin-associated proteins, such as INO80 and CXXC1, affecting their subcellular location (PubMed:24703950). Acts as a regulator of retrograde transport by assisting the TRIM27:MAGEL2 E3 ubiquitin ligase complex to mediate 'Lys-63'-linked ubiquitination of WASHC1, leading to promote endosomal F-actin assembly (PubMed:23452853). [UniProtKB/Swiss-Prot Function]</p>

### Product images:



Western blot validation of overexpression lysate (Cat# [LY411814]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC211950 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified UBE2O protein (Cat# [TP311950]). The protein was produced from HEK293T cells transfected with UBE2O cDNA clone (Cat# RC211950) using MegaTran 2.0 (Cat# [TT210002]).