

Product datasheet for **RG211950**

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:	TurboGFP
Symbol:	UBE2O
Synonyms:	E2-230K
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG211950 representing NM_022066 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCC**CGATCGCC**

ATGGCGGATCCCAGACCCCCACGCCCGCAGCTCCCGCTCCAGCCCAGGCCCGGCTCCAGCCCCGGAGG
CAGTCCCAGCCCCAGCCGACGCCCGCTCCCGGCCCGGCCCGCCCTCGGACTCGGCTCCGGGCCGTC
CTCGGACTTCGGCCAGAAGCCGGCTCGCAGCGCCTGCTGTTTTCTCACGACCTGGTGTCCGGCCGTTAC
CGTGGCTCCGTGCACTTCGGGCTGGTGCCTCATCCACGGCAGGACTCGGACTCGGAGGGCGAGGAGG
AGGGCCCGGGAGCTCGGGTGTCCGAGGCCGGGGCGGGCCACGAGGAGGGCCGGCCAGCCCCCT
GCGCCGCGGTACGTGCGCTCCAGTGGTACCCGAGGGCGTCAAGCAGCATGTGAAGGAGACCAAGCTG
AACTAGAGGACCGTTCTGTGGTCCCCGAGATGTGGTCCGGCACATGCGATCCACCGACAGTCACTGTG
GCACGGTATCGACGTCAACATCGACTGTGCCGTCAAGCTCATCGGCACCAACTGCATCATATCCCGT
CAACAGCAAGGACCTGCAGCACATCTGGCCCTTATGTATGGGGACTACATTGCCATGACTGCTGGCTG
GGGAAGTCTACGACTTGAAGAACCAGATCATCCTGAAGCTATCCAACGGCGCCAGGTGCTCCATGAACA
CGGAAGATGGCGCAAGCTCTACGACGTCTGCCCGCACGTCAGGACTCGGGTCTTTCTTCGATGATTC
CTATGGCTTACCCAGGCCAGGTGCTCATTGGCCCTGCCAAGATCTTCTCCAGCGTCCAGTGGTGTCA
GGTGTCAAGCCCCTGCTCAGACCAAGAGCAAGTCCGAGTGGTGGGAAAGAGGTGCAGTTGTAGAGT
TGAAGTTACATGGATTACCAAGAGTTTCTGTCCAGGGGCACGGACAGCGTCAAGCCCCACCCTCTGT
CATCACCCAGGAAAACCTAGGCAGGGTGAAGCGTCTCGGATGCTTTGACCATGCTCAGCGCAGCTTGGG
GAGCGTGTCTGTATGTCTTCCAGCCAAGGTAGAGCCAGCCAAGATTGCCTGGGAATGTCCAGAAAAAA
ACTGCGCCAGGGGGAGGGCTCTATGGCCAAGAAGGTGAAGCGCCTGTTGAAGAAGCAGTTGTGCGGAT
CATGTCATGCTCCCAGACACCCAGTGTCCCGGGACCATTCCATGGAAGACCCAGACAAGAAGGGGAA
TCCAAAACCAAGAGCGAAGCGGAGTCTGCCAGCCCTGAGGAGACGCCGATGGCTCTGCCAGTCCAGTGG
AGATGCAGGACGAGGGTGCAGAGGAGCCCCACGAGGCAGGAGAGCAGCTGCCCCATTCTGCTAAAAGA
AGGCAGAGATGACAGGCTGCACTCGGCAGAGCAGGACGCAGATGATGAGGCTGCTGATGACACGGACGAC



ACCAGTTCGGTGACCTCCTCTGCCAGCTCCACCACTTCCTCCCAGAGCGGCAGCGGCACGAGTCGCAAAA
AGAGCATCCCCTTGCCATCAAGAACTTAAAGCGCAAACACAAGAGGAAGAATAAAATCACTCGAGA
CTTCAAGCCAGGGGACAGGGTGGCAGTGGAGGTGGTGACCACGATGACCTCAGCCGACGTGATGTGGCAG
GATGGCTCCGTGGAATGCAACATCCGCTCCAACGACCTTCCCTGTGCACCACCTGGACAACAACGAGT
TCTGCCCTGGAGACTTCGTGGTAGATAAGCGAGTCCAGAGCTGTCCAGACCCTGCTGTCTACGGTGTGGT
ACAGTCTGGGGACCACATCGGCCGTACCTGCATGGTGAAGTGGTCAAGCTGAGGCCGAGTGGGGACGAC
GTGGAGCTGATTGGAGAAGAGGAAGATGTGAGTGTTCAGACATTGCTGACCACCCTGACTTTAGGTTCC
GTACAAC TGACATCGTCATCCGCATCGGCAATACTGAGGATGGGGCTCCTCACAAGGAGGATGAGCCATC
GGTGGGCCAGGTGGCCCGTGTGGACGTCAGCAGCAAGGTGGAGGTGGTGTGGGCTGACAACCTCAAAGACC
ATCATCTGCCCCAGCACTTGTACAACATAGAGTCTGAGATTGAGGAGTCAGACTACGATTCCGTAGAAAG
GCAGCACCAGCGGGGCATCCTCGGATGAATGGGAAGATGATAGTGACAGCTGGGAGACGGACAATGGGCT
GGTGGAGGACGAGCACC CAAGATAGAGGAGCCCCCATCCACCCTGGAGCAGCCGGTGGCCCTGAG
GACAAGGGAGTGGTGTGATCAGTGAAGAGGCACCCACAGCTGCCGTCCAGGGGGCTGTGGCCATGGCTGCC
CCATGGCCGGGCTGATGGAGAAGGCTGGCAAGGACGGGCCACCAAGAGCTTCCGGGAGTTGAAAGAGGC
CATCAAGATCCTGGAGAGCCTCAAGAACATGACTGTGGAGCAGCTGCTGACGGGCTCGCCACCTCTCCG
ACTGTGGAGCCTGAGAAGCCAACCTCGGGAGAAGAAGTTTCTGGATGACATCAAGAAGCTACAGGAAAACC
TCAAGAAGACCCTGGACAATGTGGCCATTGTAGAGGAGGAGAAGATGGAAGCAGTGCCCGACGTAGAGCG
CAAGGAGGACAAGCCCGAGGGGCAGTCACTGTGAAGGCTGAGTGGCCCAGCGAAACCCCGGTGCTGTGC
CAGCAGTGTGGCGGAAGCCTGGCGTCACTTCCACAGCGCAAGGGCGAGGTCTTCTCCGTA CTGGAGT
TTGACCCCTCAAATCATTTCTTTTAAAGAAAATTGAGTTCAGCCTCCAGAAGCCAAGAAGTTCTTCAGCAC
AGTGGGAAGGAGATGGCGCTGTGGCTACCTCACTGCCTGAGGGCATCATGGTCAAGACTTTTGAAGAT
AGAATGGACCTTCTCAGCTCTCATCAAGGGCCCCACTCGAACCCCTACGAGGATGCCCTCTACTTGT
TTGACATCCAGCTCCCCAACATCTACCCAGCCGTGCCCCCCTTCTGCTACCTCTCCCAATGCAGTGG
CCGCCTGAACCCCAACCTGTATGACAATGGGAAGGTGTGTGTGTCAGCCTCCTGGGCACCTGGATTGGAAG
GGGACAGAGAGGTGGACAAGCAAGTCCAGCCTTCTCCAGGTGCTCATCTCCATCCAAGGTCTGATCTGG
TAAATGAACCATACTACAACGAAGCCGGCTTCGACAGTGACCGAGGCTGCAGGAAGGCTATGAAAAACAG
TCGCTGTTACAATGAGATGGCGCTGATCCGCGTGGTGCAGTCCATGACCCAGCTGGTGGCGGGCCCCC
GAGGTCTTTGAGCAGGAGATCAGGCAACACTTTAGCACTGGTGGCTGGCGGCTGGTGAACCGTATCGAGT
CCTGGCTGGAACCCATGCCCTGCTGGAGAAGGCCAGGCACTGCCAACGGGTGCCAACGGCCAGCAG
CTCGCCAGAGCCCCAGCTGTAGCCGAGCTGTGCACTCCGCGCAACAAGAACCTGAGGATGGAGGGCCA
GCCCCAGGAGAGGCTCCAGGGCTCAGACTCAGAGGGCGGTGCCAGAGCCTGGCTCAGCTAGCAGGG
ACCACACAGACCAGACTTCGGAGACCGCACCAGACGCATCGGTGCCACCCAGTGTGAAACCAAGAAGCG
GAGAAAGAGCTACCGGAGCTTCTTACCTGAGAAGAGTGGCTACCTGACATCGGCTTCCCCCTTCCCA
CTTTCAAAGGTTTTCATCAAGAGCATCCGGGTGTCTGACGCAGTTCGGGGTGCCTGTAGAGGCAG
GCATGCCGGAGTGCACAGAGGACAAG

ACGCGTACGCGGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG211950 representing NM_022066
 Red=Cloning site Green=Tags(s)

MADPAAPTPAAPAPAQAPAPAPEAVPAPAAAPVPAPAPASDSASGPPSSDFGPEAGSQRLLFSHDLVSGRY
 RGSVHFLVRLIHGEDSDSEEEEEGRGSSGCSEAGGAGHEEGRASPLRRGYVRVQWYPEGVKQHVKETKL
 KLEDRSVVPRDVVRHMRSTDSQCGTVIDVNICAVKLI GTNCII YPVNSKDLQHIWPFMYGDYIAYDCWL
 GKVYDLKNQIILKLSNGARCSMNTEDGAKLYDVCPHVSDSGLFFDSDYGFYPGQVLI GPAKIFSSVQWLS
 GVKPVLSTKSKFRVVVEEVQVVVELKVTWITKSF CPGGTDVSPPPSVITQENLGRVKRLGCFDHAQRQLG
 ERCLYVFPKVEPAKIAWECPEKNCAQEGGSMAKKVKRLLKQVVRIMSCSPDTQCSRDHMEDPDKKGE
 SKTKSEAESASPEETPDGSASPVEMQDEGAEEPHEAGEQLPPFLLKEGRDRLHSAEQDADDEAADDTD
 TSSVTSSASSTSSQSGSGTSRKKSIPLSIKNLKRKHKKKNI TRDFKPGDRVAEVVTTMSADVMWQ
 DGSVECNIRSNDLFPVHHLDNNEFCPGDFVVDKRVQSCPDAVYGVVQSGDHIGRTCMVKWFKLRPSGDD
 VELIGEEEDVSVYDIADHPDFRRTTDIVIRIGNTEDGAPHKEDEPSVGQVARVDVSSKVEVWADNSKT
 IILPQHLNYIESEIEESDYDSVEGSTSGASSDEWEDSDSWETDNLVEDEHPKIEEPIPPLEQVPAE
 DKGVVISEEAATAAVQGAVAMAAPMAGLMEKAGKDGGPKSFRELKEAIKILESLKNMTVEQLL TGSPTSP
 TVEPEKPTREKFLDDIKKLQENLKKTLDNVAIVEEEKMEAVPDVERKEDKPEGQSPVKAEPSETPVLC
 QQCGGKPGVTF TSAKGEVFSVLEFAPSNSHFKKIEFQPPEAKKFFSTVRKEMALLATSLPEGIMVKTFED
 RMDLFSALIKGPTRPYEDGLYLFDIQLPNIYPAVPPHFCYLSQCSGRLNPNLYDNGKVCVSL LGTWIGK
 GTERWTSKSSLLQVLSIQGLILVNEPYNEAGFDSRGLQEGYENSRCYNEMAL IRVVQSM TQLVRRPP
 EVFEQEI RQHFTGGWRLVNRIESWLETHALLEKAQALPNGVPKASSPEPPAVAE LSDSGQQEPEDGGP
 APGEASQGS DSEGAQLASASRDHTDQTSETAPDASVPPSVKPKKRRKSYRSFLPEKSGYPDIGFLPFP
 LSKGFIKSIRGVLTFRAALLEAGMPECTEDK

TRTRPLE - GFP Tag - V

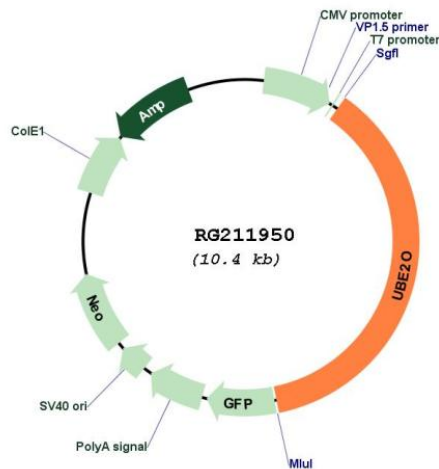
Restriction Sites:

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_022066.2](#), [NP_071349.2](#)

RefSeq Size: 5073 bp

RefSeq ORF: 3879 bp

Locus ID: 63893

UniProt ID: [Q9C0C9](#)

Cytogenetics: 17q25.1

Domains:	UBCc
Protein Pathways:	Ubiquitin mediated proteolysis
Gene Summary:	<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).</p> <p>[UniProtKB/Swiss-Prot Function]</p>