

Product datasheet for **MG210550**

Cul3 (NM_016716) Mouse Tagged ORF Clone

Product data:

| | |
|---------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | Cul3 (NM_016716) Mouse Tagged ORF Clone |
| Tag: | TurboGFP |
| Symbol: | Cul3 |
| Synonyms: | KIAA0617 |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-AC-GFP (PS100010) |
| E. coli Selection: | Ampicillin (100 ug/mL) |



[View online »](#)

ORF Nucleotide Sequence:

>MG210550 representing NM_016716
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTCGAATCTGAGCAAAGGCACGGGCAGCCGGAAGGACACCAAGATGCGGATCCGGCCTTTCCGATGA
 CCATGGATGAAAAATATGTAAACAGCATTGGGACCTTCTGAAAAATGCAATTCAGAAATCCAGCGTAA
 GAATAACAGTGGTCTTAGTTTTGAGGAGCTCTATAGAAATGCATATACAATGGTTTTGCATAAACATGGA
 GAAAAGCTCTACACTGGACTAAGAGAAGTTGTTACTGAACATCTCATAAATAAGGTGCGAGAAGATGTAC
 TAAATTCATTGAATAACAACCTTTCTTCAAACACTAAATCAAGCTTGGAAATGATCATCAAACAGCCATGGT
 GATGATTAGAGACATATTAATGTATATGGACCGTGTATATGTACAACAGAATAATGTAGAAAAATGTCTAC
 AATTTGGGATTAATAATTTTTCGAGATCAAGTTGTACGGTATGGGTGATTAGGGATCATCTTCGGCAA
 CTTTATTGGATATGATTGCCAGAGAGCGGAAAGGAGAAGTTGTAGACAGAGGAGCAATAAGAAATGCTTG
 CCAGATGTTAATGATTTTAGGTCTTGAAGGAAGATCAGTCTATGAGGAAGATTTTGAAGCTCCGTTTTTG
 GAAATGTCTGCAGAAATTTTTTCAGATGGAAAGCCAGAAATTTTTAGCAGAAAACAGTGCTTCAGTATATA
 TAAAGAAAGTAGAAGCTAGGATTAATGAGGAAATAGAGCGGGTGTGCACTGCCTTGACAAATCCACAGA
 AGAGCCTATTGTGAAGTGGTGGAGAGGGAACCTTTCCAAGCAGATGAAGACTATTGTAGAAATGGAA
 AATTCTGGGCTAGTACATATGCTGAAAAATGGAAGACAGAAGACCTTGCTTGCATGTACAAATTTTAA
 GTCGTGTGCCAAATGGTTTGAAGACCATGTGTGAATGTATGAGTTGTTATTTGAGGGAACAAGGAAAAGC
 CCTTGTCTGAGGAAGGAGAAGGGAAGAATCCTGTTGACTATATCCAGGGCTTATTGGATCTAAGAGT
 AGGTTTGATCGCTTCTCCAAGAATCCTTCAATAATGACCGGCTCTTTAAACAGACTATTGCTGGGGACT
 TCGAGTATTTCTTAAACCTCAACTCTAGTCTCCTGAATACCTCTCATTATTTATTGATGATAAACTGAA
 AAAGGGAGTCAAAGGGCTAACAGAACAAGAAGTAGAAACAATATTGGATAAGGCAATGGTCTTTTTAGG
 TTTATGCAAGAAAAAGATGTATTTGAACGTTATTATAACAACACCTGGCAAGAAGACTGCTCACAAATA
 AAAGTGTCTGATGACTCTGAGAAAAATATGATTTCTAAATTAAGACTGAGTGTGGATGTCAATTAC
 ATCGAAACTGGAAGGAATGTTTAGGGATATGAGCATCTCAAACACAACCTATGGATGAGTTCAGGCAACAT
 CTACAGGCAACGGGGTCTCTTTAGGTGGTGTGATCTCACAGTCCGGTTCTCACACGGGATATTGGC
 CTACTCAGTCAGCCACACCAAGTGCAACATCCCACCAGCACCAAGACATGCTTTTGAGATATTTAGAAG
 GTTCTACTTAGCCAAACACAGTGGTGCACAGCTCACACTCCAGCATCACATGGGTCTGCAGATCTCAAT
 GCCACCTTTTATGGTCCAGTTAAAAGGAAGATGGATCTGAGGTTGGTGTGGCGGTGCACAAGTAACTG
 GTTCTAATACACGAAGCACATACTGCAAGTCTCCACTTTCAGATGACCATATTAATGCTTTTTAATAA
 TAGAGAGAAGTACACATTTGAGGAAATTCACAAGAGACAGATATCCCTGAAAGAGAAGTGTAGAGCC
 CTCCAGTCCCTCGCTGTGGTAAACCAACACAGCGGGTCTCACAAAAGAACCAGTCCAAGGAGATAG
 AAAGTGGCCACATATTTACAGTTAATGATCAATTCACATCTAAACTACACAGAGTCAAGATTCAAACAGT
 TGCAGCCAAACAAGGTGAATCCGACCCAGAAAGGAAAGAAACAAGACAGAAAGTAGATGATGACAGAAAA
 CATGAGATAGAAGCTGCTATAGTGCGAATAATGAAGTCTAGGAAGAAGATGCAGCACAATGTTTTAGTAG
 CAGAGGTAACCTCAGCAACTGAAGGCTCGATTCTTACCAAGTCCAGTTGTTATTAAGAAACGTATTGAAGG
 ACTTATTGAGAGAGAATTTTGGCACGAACACCTGAGGATCGCAAAGTATACACATATGTAGCA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG210550 representing NM_016716
 Red=Cloning site Green=Tags(s)

MSNLSKGTGSRKDTKMRIRAFPMTMDEKYVNSIWDLLKNAIQEIQRKNNSGLSFEELYRNAITMVLHKHG
 EKLYTGLREVVTEHLINKVREDVLSLNNNFQLTLNQAANDHQTAMVMIRDILMYMDRVVYQNNVENVY
 NLGLIIFRDQVRYGCI RDHLRQTLDDMIARERKGEVDRGAI RNACQMLMILGLEGRSVYEDFEAPFL
 EMSAEFFQMESQKFLAENSASVYIKKVEARINEEIERVMHCLDKSTEETPKVVERELISKHMKTI VEME
 NSGLVHMLKNGKTEDLACMYKLSRVPNGLKTMCECMSCYLREQKALVSEEGEGKNPVDYIQGLLDLKS
 RFDRFLQESFNDRFLFKQTIAGDFEYFLNLSRSPEYLSLFI DDKLLKKGVKGLTEQEVEITL DKAMVLF
 FMQEKDVFERYKQHLARRLLTNKSVSDDSEKNMISKLKTECGCQFTSKLEGMFRDMSISNTTMDERQH
 LQATGVSLLGGVDLTVRVLTTGYWPTQSATPKCNIPAPRHAFFRFRFLAKHSGRQLTLQHMGSA DLN
 ATFYGPVKKEDGSEVGVGAQVTGSNTRKHILQVSTFQMTILMLFNNREKYTFEEIQQETDIPERELVRA
 LQSLACGKPTQRVLTKEPKSKEIESGHIFTVNDQFTSKLHRVKIQTVAAKQGESDPERKETRQKVDDDRK
 HEIEAAIVRIMKSRKKMQHNVLVAEVTQQLKARFLPSPVVIKKRIEGLIEREYLARTPEDRKVYTYVA

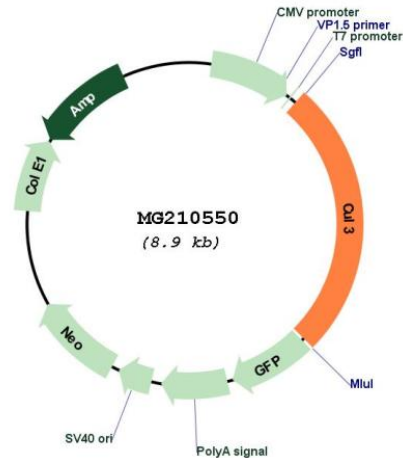
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:


ACCN: NM_016716

ORF Size: 2304 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_016716.5](#)

RefSeq Size: 2764 bp

RefSeq ORF: 2307 bp

Locus ID: 26554

UniProt ID: [Q9JLV5](#)

Cytogenetics: 1 C5

Gene Summary: Core component of multiple cullin-RING-based BCR (BTB-CUL3-RBX1) E3 ubiquitin-protein ligase complexes which mediate the ubiquitination and subsequent proteasomal degradation of target proteins (By similarity). BCR complexes and ARIH1 collaborate in tandem to mediate ubiquitination of target proteins (By similarity). As a scaffold protein may contribute to catalysis through positioning of the substrate and the ubiquitin-conjugating enzyme (By similarity). The E3 ubiquitin-protein ligase activity of the complex is dependent on the neddylation of the cullin subunit and is inhibited by the association of the deneddylated cullin subunit with TIP120A/CAND1 (By similarity). The functional specificity of the BCR complex depends on the BTB domain-containing protein as the substrate recognition component (By similarity). BCR(KLHL42) is involved in ubiquitination of KATNA1 (By similarity). BCR(SPOP) is involved in ubiquitination of BMI1/PCGF4, BRMS1, H2AFY and DAXX, GLI2 and GLI3 (By similarity). Can also form a cullin-RING-based BCR (BTB-CUL3-RBX1) E3 ubiquitin-protein ligase complex containing homodimeric SPOPL or the heterodimer formed by SPOP and SPOPL; these complexes have lower ubiquitin ligase activity (By similarity). BCR(KLHL9-KLHL13) controls the dynamic behavior of AURKB on mitotic chromosomes and thereby coordinates faithful mitotic progression and completion of cytokinesis (By similarity). BCR(KLHL12) is involved in ER-Golgi transport by regulating the size of COPII coats, thereby playing a key role in collagen export, which is required for embryonic stem (ES) cells division: BCR(KLHL12) acts by mediating monoubiquitination of SEC31 (SEC31A or SEC31B) (PubMed:22358839). BCR(KLHL3) acts as a regulator of ion transport in the distal nephron; by mediating ubiquitination of WNK4 (By similarity). The BCR(KLHL20) E3 ubiquitin ligase complex is involved in interferon response and anterograde Golgi to endosome transport: it mediates both ubiquitination leading to degradation and 'Lys-33'-linked ubiquitination (By similarity). The BCR(KLHL21) E3 ubiquitin ligase complex regulates localization of the chromosomal passenger complex (CPC) from chromosomes to the spindle midzone in anaphase and mediates the ubiquitination of AURKB (By similarity). The BCR(KLHL22) ubiquitin ligase complex mediates monoubiquitination of PLK1, leading to PLK1 dissociation from phosphoreceptor proteins and subsequent removal from kinetochores, allowing silencing of the spindle assembly checkpoint (SAC) and chromosome segregation. The BCR(KLHL22) ubiquitin ligase complex is also responsible for the amino acid-stimulated 'Lys-48' polyubiquitination and proteasomal degradation of DEPDC5. Through the degradation of DEPDC5, releases the GATOR1 complex-mediated inhibition of the TORC1 pathway (By similarity). The BCR(KLHL25) ubiquitin ligase complex is involved in translational homeostasis by mediating ubiquitination and subsequent degradation of hypophosphorylated EIF4EBP1 (4E-BP1) (By similarity). The BCR(KBTBD8) complex acts by mediating monoubiquitination of NOLC1 and TCOF1, leading to remodel the translational program of differentiating cells in favor of neural crest specification (By similarity). Involved in ubiquitination of cyclin E and of cyclin D1 (in vitro) thus involved in regulation of G1/S transition (By similarity). Involved in the ubiquitination of KEAP1, ENC1 and KLHL41 (By similarity). In concert with ATF2 and RBX1, promotes degradation of KAT5 thereby attenuating its ability to acetylate and activate ATM (By similarity). The BCR(KCTD17) E3 ubiquitin ligase complex mediates ubiquitination and

degradation of TCHP, a down-regulator of cilium assembly, thereby inducing ciliogenesis (By similarity). The BCR(KLHL24) E3 ubiquitin ligase complex mediates ubiquitination of KRT14, controls KRT14 levels during keratinocytes differentiation, and is essential for skin integrity (By similarity).[UniProtKB/Swiss-Prot Function]