

Product datasheet for **RG233114**

Cullin 2 (CUL2) (NM_001198777) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cullin 2 (CUL2) (NM_001198777) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CUL2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide
Sequence:

>RG233114 representing NM_001198777
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTCCTTTGAAACCAAGAGTAGTAGATTTTGTATGAAACATGGAACAAACTTTTGACGACAATAAAAGCCG
TGGTCATGTTGGAATACGTCGAAAAGAGCAACATGGAATGACCGTTTCTCAGATATCTATGCTTTATGTGT
GGCCTATCCTGAACCCCTTGGAGAAAGACTTTATACAGAACTAAGATTTTTTGGAAAAATCATGTTTCGG
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ACAGCAAGGGTGCAGACTATATGGACTGCTTATATAGGTATCTCAACACCCAGTTTATTAATAAAGAATAA
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GAGCTAGCATTGGATATGTGGAGGAAATGATGGTTGAACCCTTCAGGCCATCCTTATCCGAATGCTGC
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CTACATCAATGCAGAAAGACACACCACAAGAAATGGAGCAGACTAGAAGTGCAGTTGATGAGGACCGGAA
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CAAGAGGTGATTAGCCAGTCAAGAGCTAGGTTTAAATCCAGTATCAGCATGATTAAGAAGTATTGAAG
TTCTGATAGACAAAACAATACATAGAACGCAGCCAGGCGTCGGCAGATGAATACAGCTACGTCGCG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG233114 representing NM_001198777
 Red=Cloning site Green=Tags(s)

MSLKPRVVDFDETWNKLLTTIKAVVMLEYVERATWDRFSDIYALCVAYPEPLGERLYTETKIFLENHVR
 HLHKRVLESEEQVLVMYHRYWEEYSKGDYMDCLYRYLNTQFIKKNKLEADLQYGGVDMNEPLMEIG
 ELALDMWRKLMVEPLQAILIRMLLREIKNDRGGEDPNQKVIHGVINSFVHVEQYKKKFKFYQEIFESP
 FLTETGEYKQAEASNLQESNCSQYMEKVLGRKDEEIRCRKYLHPSSYTKVIHECQQRMVADHLQFLHA
 ECHNIIRQEKKNDMANMYVLLRAVSTGLPHMIQELQNHIEHDEGLRATSNLTQENMPTLFVESVLEVHGKF
 VQLINTVNLNGDQHFMSALDKALTSVVNYREPKSVCKAPELLAKYCDNLLKKSAGKMTENEVEDRLTSFIT
 VFYIDDKDVFQKFYARMLAKRLIHGLSMSMDSEEAMINKLKQACGYEFTSKLHRMYTDMVSADLNKFK
 NNFIKNQDVIDLGISFQIYVLQAGAWPLTQAPSSTFAIPQELEKSVQMFELFYSQHFSGRKLTLWHLK
 TGEVKMNYLGKPYVAMVTTYQMAVLLAFNNSETVSYKELQDSTQMNKELTKTIKSLLDVKMINHDSEKE
 DIDAESSFLNMNFSKRTKFKITTSMQKDTPEMEQTRSAVDEDRKMYLQAAIVRIMKARKVLRHNALI
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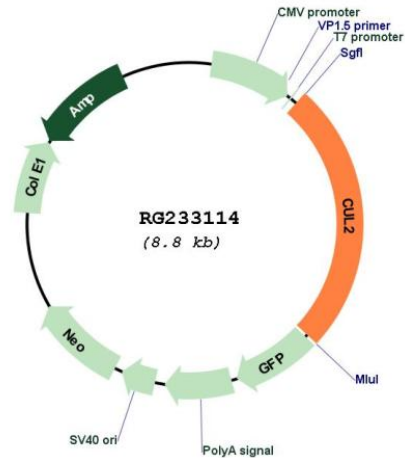
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:


ACCN: NM_001198777

ORF Size: 2235 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_001198777.2](#)

RefSeq Size: 4246 bp

RefSeq ORF: 2238 bp

Locus ID:	8453
UniProt ID:	Q13617
Cytogenetics:	10p11.21
Protein Families:	Druggable Genome
Protein Pathways:	Pathways in cancer, Renal cell carcinoma, Ubiquitin mediated proteolysis
Gene Summary:	Core component of multiple cullin-RING-based ECS (ElonginB/C-CUL2/5-SOCS-box protein) E3 ubiquitin-protein ligase complexes, which mediate the ubiquitination of target proteins. ECS complexes and ARIH1 collaborate in tandem to mediate ubiquitination of target proteins (PubMed:27565346). May serve as a rigid scaffold in the complex and may contribute to catalysis through positioning of the substrate and the ubiquitin-conjugating enzyme. 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. The functional specificity of the ECS complex depends on the substrate recognition component. ECS(VHL) mediates the ubiquitination of hypoxia-inducible factor (HIF).[UniProtKB/Swiss-Prot Function]