

## Product datasheet for **MG217247**

### **Klhl12 (NM\_153128) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Klhl12 (NM_153128) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Klhl12
Synonyms:	C3ip1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG217247 representing NM\_153128  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGGCGGCATTATGGCCCTAAAGACATAATGACAAACACTCAGCTAAGTCCATCCTCAACTCCATGA  
 ACTCCCTCAGGAAGAGCAACACCCTCTGTGATGTGACCTTGAGAGTGAGCAGAAAGACTCCCTCGCGA  
 TCGGATTGTGCTGGCCGCTGCAGTGATTATTTCTGTGCCATGTTCACTAGTGAGCTTTCAGAGAAGGGG  
 AAGCCGTATGTTGACATCAAGTTTAACTGCTGCTACCATGGAGATCCTGCTGGACTTCGTGTACACAG  
 AAACAGTACATGTGACAGTGGAGAATGTTCAAGAAGTCTCCCTGCAGCCTGTCTTTCAGCTGAAAGG  
 TGTGAAACAAGCCTGCTGTGAGTTCTTAGAAAGTCAAGTGGATCCATCTAATGCCTGGGTATCAGGGAT  
 TTTGCTGAAACTCACAATTGCGTTGACCTGATGCAAGCAGCTGAGGTGTTTAGCCAGAAGCATTTTCCTG  
 AAGTGGTGCAGCAGGAGTTCATTCTTCTGAGTCAAGGGAGGTGGAGAAGCTAATCAAGTGCACGA  
 GATTCAGGTGGATTCTGAAGAGCCAGTCTTTGAGGCTGTTATCAACTGGGTGAAGCATGCCAAGAAGGAG  
 CGAGAAGAGTCTTTACCTGACCTTTACAGTATGTTCCGATGCCCTGCTGACCCCAAGTACATTACAG  
 ATGTAATTGATGCTGAGCCTTTCATCCGCTGTAGTTTACAATGCAGAGATCTAGTTGATGAAGCAAGAA  
 GTTTCACCTGAGGCCTGAACTTCGGAGTCAAGTCAAGGACCCAGAACAAGGGCCCGCTAGGAGCCAAT  
 GAAGTGCCTTCTGGTGGTTGGGGCTTCGGAAGCCAGCAGTCTCCTATTGATGTGGTAGAGAAGTATGACC  
 CCAAGACACAGGAGTGGAGCTTTTTACCAAGTATCACTCGCAAGAGACGGTATGTGGCCTCAGTTTCCTT  
 ACATGATCGGATCTATGTAATTGGTGGCTACGATGGCCGTTCCCGCTCAGTTCGGTGGAAATGTCTAGAC  
 TATACAGCAGACGAAGATGGAGTGTGGTACTCTGTGGCCCTATGAATGTGGCGGAGGCCCTTGTGGAG  
 CCACCCTCTGGGAGATATGATTTACGTTCTGGAGGCTTTGATGGAAGTAGGCGTCATACAAGTATGGA  
 CGGGTATGACCCAAACATCGATCAGTGGAGTATGCTGGGAGATATGCAGACAGCTCGAGAGGGTGCAGGA  
 CTAGTAGTGCCAGCGGAATAATCTATTGTCTAGGAGGATATGATGGCTTGAACATATTAATTCAGTTG  
 AGAAATATGATCCCATACAGGACTGGACTAACGTTACGCCTATGGCCACCAAGCGTTCTGCTTATAA  
 CATTTCGACTGATTCCTGGACAAGTGTGACCAAGTATGACCACGCCTCGATGCTATGTAGGGGCCACAGTG  
 CTTTCGAGGGAGACTCTATGCAATTGCAGGATACGATGGGAATTCTCTGCTGAGCAGCATTGAGTGTATG  
 ACCCTATCATCGACAGCTGGGAAGTAGTGGCCTCCATGGGAACCCAGCGTTGTGATGCTGGTGTGTGTG  
 TCTCCGAGAAAAAG

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>MG217247 representing NM\_153128  
 Red=Cloning site Green=Tags(s)

MGGIMAPKDIMTNTHAKSILNSMNSLRKSNTLCDVTLRVEQKDFPAHRIVLAACSDYFCAMFTSELSEKG  
 KPYVDIQGLTAATMEILLDFVYETVHVTVENVQELLPAACLLQLKGVKQACCEFLSQLDPSNCLGIRD  
 FAETHNCVDLMQAAEFVSKHFPEVVQHEEFILLSQGEVEKLIKDEIQVDSEEPVFEAVINWVKHAKKE  
 REESLPDLLQYVRMPLLTPTYITDVIDAEPFIRCSLQCRDLVDEAKKFHLRPELRSQMGPTRARLGN  
 EVLLVVGFGSQSPIDVVEKYDPKTQEWSFLPSITRKRYYVASVSLHDRIYVIGGYDGRSRLSSVECLD  
 YTADEGDVWYSVAPMNVRRGLAGATTLGDMIYVSGGFDGSRRTSMERYDPNIDQWSMLGDMQTAREGAG  
 LVVASGIIYCLGGYDGLNILNSVEKYDPHTGHWTNVTMPATKRSAYNIRTDSWTTVTSMTTPRCYVGVATV  
 LRGRLYAIAGYDGNLSLSSIECYDPIIDSWEVVASMGTRQCDAGVCVLRK

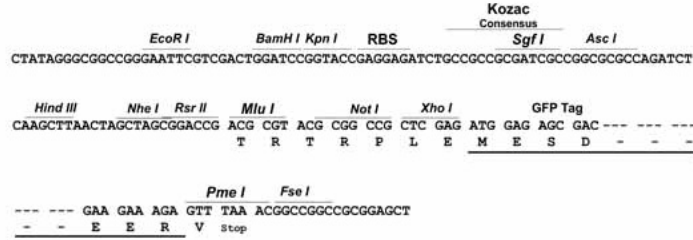
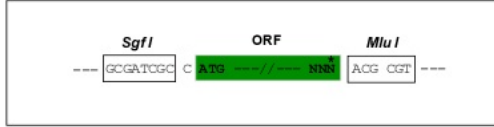
**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

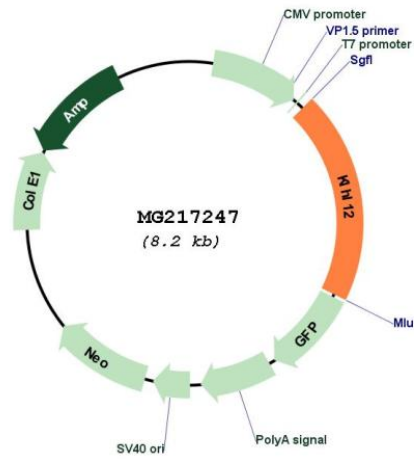
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



<b>ACCN:</b>	NM_153128
<b>ORF Size:</b>	1623 bp
<b>OTI Disclaimer:</b>	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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. <a href="#">More info</a></p>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<a href="#">NM_153128.1</a>
<b>RefSeq Size:</b>	3196 bp
<b>RefSeq ORF:</b>	1626 bp
<b>Locus ID:</b>	240756
<b>UniProt ID:</b>	<a href="#">Q8BZM0</a>
<b>Cytogenetics:</b>	1 E4

**Gene Summary:**

Substrate-specific adapter of a BCR (BTB-CUL3-RBX1) E3 ubiquitin ligase complex that acts as a negative regulator of Wnt signaling pathway and ER-Golgi transport. The BCR(KLHL12) complex 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). The BCR(KLHL12) complex is also involved in neural crest specification: in response to cytosolic calcium increase, interacts with the heterodimer formed with PEF1 and PDCD6/ALG-2, leading to bridge together the BCR(KLHL12) complex and SEC31 (SEC31A or SEC31B), promoting monoubiquitination of SEC31 and subsequent collagen export. As part of the BCR(KLHL12) complex, also acts as a negative regulator of the Wnt signaling pathway by mediating ubiquitination and subsequent proteolysis of DVL3. The BCR(KLHL12) complex also mediates polyubiquitination of DRD4 and PEF1, without leading to degradation of these proteins. [UniProtKB/Swiss-Prot Function]