

## Product datasheet for **MC222366**

### **Ect2 (NM\_001177625) Mouse Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Ect2 (NM_001177625) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Ect2
Synonyms:	A1528536; mKIAA4037
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**Fully Sequenced ORF:** >MC222366 representing NM\_001177625  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGCTGACGACAGCGTGTACCATCTCCTTCTGAGATAACTAGCTTGGCAGACTCTTCAGTGTGGT  
 CTAAGGTTGCTGAAATGTCCAAGGAAAACCTGTGCTTGGCGTCTACTTCAAATGTTGATGAAGAAATGCC  
 GCAGGTTGAAGCAAGAGTGATAATGGTCCAGGATGCTGGGAAACAAGAAGAACTTCTAAAGGCCCTAAAG  
 GAAATGAAAGTGCCTGTGTAAGATGGACTCAATGGAAGAATTTGAAAGTTGGATTCCCCAGAATTTG  
 AGAATATATTTGTAGTTACTGACTTCCAGAATTCTGTCTTCAATGACTTATACAAGGCTGATTGTAGGAT  
 TGTGGGCCACCAGTTATACTCAACTGTGCACAAAGGGGAGAGCCCTTCCGTTTTCTGCCGGCCGCTG  
 TATTGTACGAGTATGCTGAACCTGGTGTCTGCTTCACTGGATTCAGGAAGAAGGAGGAGCTTGTCAAAT  
 TGGTGACGTTGGTTCATCATATGGGTGGAGTTATTCGAAAAGAGTGAATTCAAAGTAACACATCTGGT  
 GGCAAATGTACACAAGCGGAAAAATTTAGGGTGTCTGTGAGCCTGGGCACTCCAATTATGAAGCCAGAA  
 TGGAATTTATAAGCGTGGGAAAGACGCAATGAACAGTGTTCCTGTGCAGCAGTTGATGACTTTAGAATG  
 AATTTAAAGTTCCTCCATTCCAAGATTGCATTTAAAGTTTCTGGGATTTTCAGATGAAGAGAAACATAG  
 TATGGAAGAAATGACTGAAATGCAAGGAGGTAGCTATTTACCAGTTGGGGATGAAAGGTGCACTCACCTT  
 ATTGTTGAAGAGAATACAGTAAAGGACCTTCCATTCGAACCTTCAAAGAACTTTTTGTTGTCAAGCAAG  
 AGTGGTTCTGGGAAGCATTAGATGGACGCTCGTGCAGGAGAGACTATGATTTGTATGAAAAGGCTAA  
 TACTCTGAGCTCAAGAAATCGGTGTCTGTCTTCTCTAAGTACTCCAAACAGCAACCGCAAGAGACGG  
 AGATTGAAAGAGACCCTGGCTCAGCTCTCAGGGAGACTGACCTCTCCTTTCCCTCCCGGAAGCGGC  
 CCTCAGCTGAGCACTCTTTTCTATTGGCTCACTCCTGGATATCTCCAACACCCGAGTCCAGCATCCA  
 CTATGGAGAAACACCGAAGTCTGTGCTAAGTCTTCTAGAAGTTCTACTCCAGTTCTCCAAAGCAGTCA  
 GCCAGGTGGCAGGTGGCGAAAGAGCTCTACCAGACTGAGAGCAATTATGTCAATATACTGCCACAATCA  
 TTCAATATTTAGGTGCCCTTAGAAGAAGAAGGACAGCGTGGTGGCCTATTCTTGACCTGAGGAGAT  
 CAAGACTATTTTTGGGAGCATCCAGATATCTTTGATGTGCATATGAAGATCAAGGATGATCTTGAAGAC  
 CTTATTGCTAACTGGGATGAGAGCAGAAGTATTGGTGACATCTTCTTAAATATGCAAAGATTTGGTAA  
 AAACCTACCCTCCGTTTGTAACTTCTTTGAAATGAGCAAGGAAATGATCATTAAATGTGAGAAACAAA  
 GCCCAGATTTTCATGCTTCTCAAGATAAATCAAGCTAAACCAGAATGTGGACGACAGAGCCTTGTGGAA  
 CTTCTCATCCGGCCAGTGCAGAGGCTACCCAGTGTGCTTTACTTTTAAACGATCTTAAAAGCATACAG  
 CTGATGAAAATCCAGACAAAAGCACTTTAGAAAAGCTATTGGATCACTAAAAGAAGTAATGACACATAT  
 CAATGAGGATAAGAGAAAAACAGAAGCACAGAAGCAAATTTTTGATGTTGTTTATGAAGTAGATGGATGC  
 CCAGCTAATCTTATCTTCTCATCGGAGCCTGGTGAACGAGTGGAAACGGTTTTCCCTTGGTGAGCACC  
 CTTGCGACCGAGGAGAACAAGTCACTCTTCTTCTTCAATGACTGCCTCGAGATAGCAAGAAAGCGGCA  
 CAAGGTTATTGGCACTTTTGAAGTCTCACGACCGCACCCGGCCCCCGCTTCTCTGAAGCACATTCAT  
 CTCATGCCTCTTCTCAGATTAAGAAGGTGCTGGACATCCGAGAGACAGAAGATTGTCACAATGCCTTTG  
 CCTTGTGTGAAGCCACCAACAGAACAGGCCAATGTACTGCTCAGCTTCCAGATGACGTGAGGAGGCT  
 TCCAAAGGAGAGCTGGCTGAAGATGCTGTGCGGACATGTAGCCAACACCATTTGTAAGGAGATGCTGAG  
 AATCTTATGTATGGCTGATCCAGAATCTTTGAAGTAAATACAAAAGATATGGATAGTACATTGAGTC  
 GAGCATCTAGAGCAATAAAGAAGACTTCAAAAAGGTTACAAGGGCATTCTTTTTTCCAAAACCTCCAA  
 GAGAGCCCTGCGGATGGCTTTTTCATCATCCCATAGCTCAGAGGGAAGGAGTCTCCGAGCAGTGGCAAG  
 CTTGCTGTGAGCCGTCTGTCCAGCACATCATCCTTAGCAGGATTCATCTCCCTCCCTTGTGAGCCTCC  
 CTTCTTTCTTGAACGGAGAAGTCATACATTAAGTCGATCTACAACCTCACTTGAT**TGA**

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI  
**ACCN:** NM\_001177625

<b>Insert Size:</b>	2649 bp
<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<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_001177625.1</a> , <a href="#">NP_001171096.1</a>
<b>RefSeq Size:</b>	4002 bp
<b>RefSeq ORF:</b>	2649 bp
<b>Locus ID:</b>	13605
<b>UniProt ID:</b>	<a href="#">Q07139</a>
<b>Cytogenetics:</b>	3 A3
<b>Gene Summary:</b>	<p>Guanine nucleotide exchange factor (GEF) that catalyzes the exchange of GDP for GTP. Promotes guanine nucleotide exchange on the Rho family members of small GTPases, like RHOA, RHOC, RAC1 and CDC42. Required for signal transduction pathways involved in the regulation of cytokinesis. Component of the centralspindlin complex that serves as a microtubule-dependent and Rho-mediated signaling required for the myosin contractile ring formation during the cell cycle cytokinesis. Regulates the translocation of RHOA from the central spindle to the equatorial region. Plays a role in the control of mitotic spindle assembly; regulates the activation of CDC42 in metaphase for the process of spindle fibers attachment to kinetochores before chromosome congression. Involved in the regulation of epithelial cell polarity; participates in the formation of epithelial tight junctions in a polarity complex PARD3-PARD6-protein kinase PRKCQ-dependent manner. Plays a role in the regulation of neurite outgrowth. Inhibits phenobarbital (PB)-induced NR1I3 nuclear translocation. Stimulates the activity of RAC1 through its association with the oncogenic PARD6A-PRKCI complex in cancer cells, thereby acting to coordinately drive tumor cell proliferation and invasion. Also stimulates genotoxic stress-induced RHOB activity in breast cancer cells leading to their cell death.[UniProtKB/Swiss-Prot Function]</p> <p>Transcript Variant: This variant (2) is missing an in-frame coding exon compared to variant 1, resulting in a shorter isoform (2) lacking an internal protein segment compared to isoform 1. Variants 2 and 3 encode the same isoform.</p>