

## Product datasheet for **MC222574**

### **Ect2 (NM\_007900) Mouse Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Ect2 (NM_007900) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Ect2
Synonyms:	A1528536; mKIAA4037
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**Fully Sequenced ORF:** >MC222574 representing NM\_007900  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGCTGACGACAGCGTGTACCATCTCCTTCTGAGATAACTAGCTTGGCAGACTCTTCAGTGTGGT  
 CTAAGTTGCTGAAATGTCCAAGGAAAACCTTGTGCTTGGCGTCTACTTCAAATGTTGATGAAGAAATGCC  
 GCAGGTTGAAGCAAGAGTGATAATGGTCCAGGATGCTGGGAAACAAGAAGAACTTCTAAAGCCCTTAAAG  
 ACTATTAAGATAATGGAAGTCCCTGTTATAAAGATAAAAAGAAAGTTGCTCGGAAAATCGGAGGAAAAAT  
 TAATAAAAAGTATTATTAATATGGAATGAAAAGTCCCTGTGTAAGATGGACTCAATGGAAGAAATTTGA  
 AAGTTTGGATTCCCAGAATTTGAGAATATTTGTAGTTACTGACTCCAGAATCTGTCTTCAATGAC  
 TTATAACAAGGCTGATTGTAGGATTGTTGGGCCACCAGTTATACTCACTGTGCACAAAGGGGAGAGCCCT  
 TGCCGTTTTCTGCCGGCCGCTGTATTGTACGAGTATGCTGAACCTGGTCTCTGCTTCACTGGATTGAG  
 GAAGAAGGAGGAGCTTGTCAAATGGTGTGACGTTGGTTCATCATATGGGTGGAGTTATTCGAAAAGAGTGT  
 AATTCAAAAGTAACACATCTGGTGGCAAATGTACACAAGGCCGAAAAATTTAGGGTTGCTGTGAGCCTGG  
 GCACTCCAATTATGAAGCCAGAATGGATTATAAAGCGTGGGAAAAGACGCAATGAACAGTGTCTTCTGTGC  
 AGCAGTTGATGACTTTAGAAATGAATTTAAAGTTCCTCCATTCCAAGATTGCATTTTAAGTTTCTGGGA  
 TTTTCAGATGAAGAGAAACATAGTATGGAAGAAATGACTGAAATGCAAGGAGGTAGCTATTTACCAGTTG  
 GGGATGAAAGGTGCACTCACCTATTGTTGAAGAGAATACAGTAAAGGACCTTCCATTGCAACCTTCAA  
 GAACTTTTTGTTGTCAAGCAAGAGTGGTCTGGGGAAGCATTGAGTGGACGCTCGTGCAGGAGAGACT  
 ATGATTTGTATGAAAAGGCTAATACTCCTGAGCTCAAGAAATCGGTGTCTCTGCTTTCTCTAAGTACTC  
 CAACACCAACCGCAAGAGACGGAGATTGAAAGAGACCCTGGCTCAGCTCCAGGAGAGACTGACCTCTC  
 TCTTTTCCCTCCCGGAAGCGGCCCTCAGCTGAGCACTCTCTTTCTATTGGCTCACTCTGGATATCTCC  
 AACACACCCGAGTCCAGCATCCACTATGGAGAAAACACCGAAGTCTGTGCTAAGTCTTCTAGAAATTCTA  
 CTCCAGTTCTCCAAAGCAGTCAAGCAGGTGGCAGGTGGCGAAAGAGCTTACCAGACTGAGAGCAATTA  
 TGTCAATATACTGGCCACAATCATTCAATTATTTAGGTGCCCTTAGAAGAAGAAGGACAGCGTGGTGGG  
 CCTATTCTGCACCTGAGGAGATCAAGACTATTTTGGGAGCATCCAGATATCTTTGATGTGCATATGA  
 AGATCAAGGATGATCTTGAAGACCTATTGCTAACTGGGATGAGAGCAGAAGTATTGGTGCATCTTTCT  
 TAAATATGAAAAGATTTGGTAAAACCTACCCTCCGTTTGTAACTTCTTTGAAATGAGCAAGGAAATG  
 ATCATTAATGTGAGAAACAAAAGCCAGATTTATGCTTTCCTCAAGATAAATCAAGCTAAACCAGAAT  
 GTGGACGACAGAGCCTTGTGAACTTCTCATCCGCCAGTGCAGAGGCTACCCAGTGTGCTTTACTTTT  
 AAACGATCTTAAAAGCATACAGCTGATGAAAATCCAGACAAAAGCACTTTAGAAAAAGCTATTGGATCA  
 CTAAGAAGTAATGACACATATCAATGAGGATAAGAGAAAAACAGAAGCACAGAAGCAAATTTTGGATG  
 TTGTTTATGAAGTAGATGGATGCCAGTAATCTTTATCTTCTCATCGGAGCCTGGTGCACGAGTGGG  
 AACGGTTTCCCTTGGTGTGACACCTTGGCAGGAGGAGAAACAGTCACTCTTCTCTTCAATGACTGC  
 CTCGAGATAGCAAGAAAGCGGCACAAGTTATTGGCACTTTTGAAGTCTCACGACCGCACCCGGCCCC  
 CCGCTTCTGTAAGCACATTCATCTCATGCCTTTTCTCAGATTAAGAAGGTGCTGGACATCCGAGAGAC  
 AGAAGATTGTACAATGCCTTTGCCTTGTGTAAGGCCAACAGAACAGGCCAATGTACTGCTCAGC  
 TTCCAGATGACGTCAGAGGAGCTTCAAAGGAGAGCTGGCTGAAGATGCTGTGCCGACATGTAGCCAACA  
 CCATTTGTAAGGCAGATGCTGAGAATCTTATGTATGTGGCTGATCCAGAATCCTTTGAAGTAAATACAAA  
 AGATATGGATAGTACATTGAGTCGAGCATCTAGAGCAATAAAGAAGACTTCAAAAAGGTTACAAGGGCA  
 TTCTCTTTTTCCAAAACCTCCAAGAGAGCCCTGCGGATGGCTCTTTCATCATCCCATAGCTCAGAGGGAA  
 GGAGTCTCCGAGCAGTGGCAAGCTTGTGTGAGCCGTCTGTCCAGCACATCATCTTAGCAGGTATTCC  
 ATCTCCCTCCCTGTGAGCCTCCCTTCTTTGTAACGGAGAAGTCATACATTAAGTCGATCTACAAC  
 CACTTGAT**TGA**

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI

<b>ACCN:</b>	NM_007900
<b>Insert Size:</b>	2742 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_007900.3</a> , <a href="#">NP_031926.2</a>
<b>RefSeq Size:</b>	4095 bp
<b>RefSeq ORF:</b>	2742 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 NR113 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 (1) encodes the longer isoform (1). CCDS Note: The coding region has been updated to an alternate splice pattern, which adds an in-frame coding exon, and extends the N-terminus to one that is more supported by available conservation data.</p>

