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Product datasheet for MR223423

Ect2 (NM_007900) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ect2 (NM_007900) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Ect2
Synonyms:	AI528536; mKIAA4037
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin

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ORF Nucleotide Sequence:

>MR223423 representing NM_007900
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCTGACGACAGCGTGTTACCATCTCCTTCTGAGATAACTAGCTTGGCAGACTCTTCAGTGTTTGATT
CTAAAGTTGCTGAAATGTCCAAGGAAAACTTGTGCTTGGCGTCTACTTCAAATGTTGATGAAGAAATGCC
GCAGGTTGAAGCAAGAGTGATAATGGTCCAGGATGCTGGGAAACAAGAAGAACTTCTAAAGGCCTTAAAG
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ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
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Protein Sequence:

>MR223423 representing NM_007900
Red=Cloning site Green=Tags(s)

MADDSVLPSPSEITSLADSSVFDSKVAEMSKENLCLASTSNVDEEMPQVEARVIMVQDAGKQEELLKALK
TIKIMEVPVIKIKESCPGKSEEKLIKSIINMEMKVPCVKMDSMEEFESLDSPEFENIFVVTDFQNSVFND
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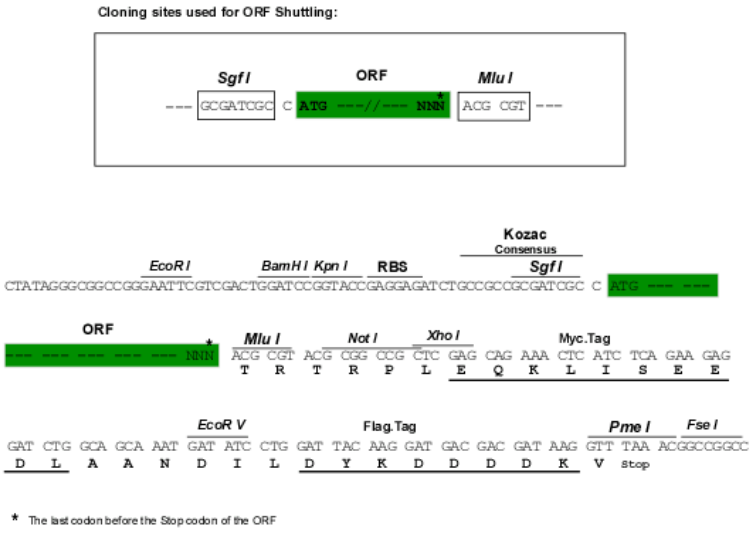
LEIARKRHKVIGTFRSPHDRTRPPASLKHIHLMPLSQIKKVLDIRETEDCHNAFALLVRPPTEQANVLLS
FQMTSEELPKESWLKMLCRHVANTICKADAENLMYVADPESFEVNTKDMDSTLSRASRAIKKTSKKVTRA
FSFSKTPKRALRMALSSSHSSEGRSPPSSGKLAVSRLSSTSSLAGIPSPSLVSLPSFFERRSHTLSRSTT
HLI

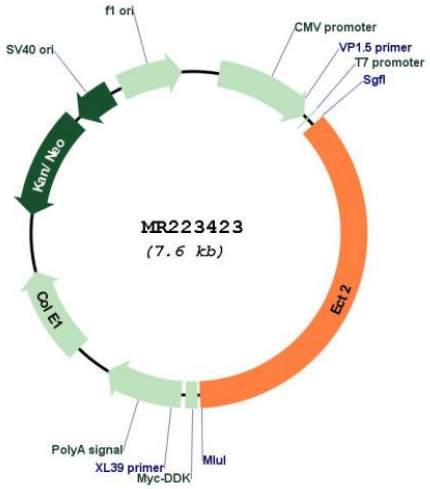
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:	NM_007900
ORF Size:	2739 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_007900.3, NP_031926.2
RefSeq Size:	4095 bp
RefSeq ORF:	2742 bp
Locus ID:	13605
UniProt ID:	Q07139
Cytogenetics:	3 A3

MW: 103.6 kDa

Gene Summary: 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]