

## Product datasheet for **MR230524**

### **Eps8 (NM\_001271589) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Eps8 (NM_001271589) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Eps8
Synonyms:	AW261790
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**ORF Nucleotide Sequence:**

>MR230524 representing NM\_001271589  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGATGGCAGCCCGGATCGACAGGGATGTGCAAACTCTAAACCATATTTTGGATGACATTGAATTTTTTA  
 TCACAAACTCCAAAAGCCGCCGAAGCGTTTTCTGAGCTTTCTAAAAGGAAGAAAAGTAAGAAAAGTAA  
 AAGGAAAGGACCTGGAGAGGGCGTTTTAACACTGAGGGCAAACCCGCCACCTCCTGATGAATTTGTTGAC  
 TGTTCAGAAAGTTAAACATGGATTCAACCTTCTGGCCAAGTTGAAGTCCCATATCCAGAACCCGAGTG  
 CTTTCCAGATCTGGTTCAATTTTTTTGTTTACTCCACTAAATATGGTGGTCCAGGCAACAGGTGGCCCCGAACT  
 GGCCAGTTCGGTACTCAGCCACTGTTGACAAAAGACACAGTTGATTTCTTAAACTACACAGCCACTGCG  
 GAGAACGGAAGCTGTGGATGTCCTGAGGAGATAGTTGGTGAAAGTGAGAGCAGAGTGGCCGAAAGAAC  
 AGTTCATCCACCTTACGTCCCGAGGTTCCGCAACGGCTGGGAGCCCCGATGCTGAACTTCATGGCGCG  
 GCCACAGAGCAAGACATGTATCAACTGGCCGAGTCCGTGGCCAACGCAGAACACCAGCGCAAAACAGGAC  
 AGCAAGAGGCTGTCCACAGAGCATTCCAATGTGTCCGACTATCCTCCAGCCGACGGATATGCGTACAGTA  
 GCAGCATGTACCACAGAGGACCACATGCAGACCACGGGGAGGCTGCCATGCCTTTCAAGTCAACTCTAA  
 TCACCAAGTAGATAGGAATTATGACGCAGTCAAAACACAACCCAAAGAAATACGCCAAATCCAAGTACGAC  
 TTTGTGGCGAGGAACAGCAGCGAGCTCTCGGTTATGAAAGATGATGTCTTAGAGATACTCGACGATCGAA  
 GGCAGTGGTGGAAAGTCCGGAATGCCAGTGGAGACTCTGGGTTTGTGCCAAATAACATTTGGATATCAT  
 GAGAACTCCGGAATCTGGAGTGGGGCGCGCTGACCCCCATACACACATACCATACAGAAACAAAGGACG  
 GAATACGGCCTGAGATCAGCTGACACTCCTTCTGCCCATCACCCCTCCAACGCCAGCACCCGTTCCGG  
 TCCCCCTCCACCTTCTGTACCAGCACCCGTTTCTGTGCCAAGTCCCAGCCAATGTCAACCCGCCAGAA  
 CAGCAGCTCCAGTGACAGTGGGGCAGCATTGTGCGGGACAGCCAGAGATACAAACAACCTCCAGTGGAA  
 CGAAGGAAGTCCCAGATGGAAGAGGTTCCAGGATGAGCTCTCCAGAGGCTGACCATCGGGCGCAGTGCTG  
 CACAGAGGAAGTCCACGTGCCACGGCAGAACGTTCCAGTGTCAATATCACTTATGACTCCTCACCCGGA  
 AGAAGTAAAGACTTGGCTGCAGTCAAAGGGATTCAACCCCGTACTGTCAATAGCCTCGGGGTGTTGAAC  
 GGAGCACAACTCTTTCTCTCAACAAAGACGAACTGAGGTCTGTCTGCCGGAAGGTGCCAGAGTCTTTA  
 ACCAAATCACTGTTCAGAAAGCTGCTTTGGAGGACAGTAATGGAAGCTCCGAGTTACAAGAGATCATGCG  
 GAGACGGCAGGAGAAGATCAGCGCCGCTGCGAGCGACTCGGGAGTGGAGTCTTTCGATGAAGGGAGCAGC  
 CAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR230524 representing NM\_001271589  
 Red=Cloning site Green=Tags(s)

MMAARIDRDVQILNHILDDIEFFITKLQKAAEFSELSKRKSKKSKRKGPGEVLT LRAKPPPPDEFVD  
 CFQKFKHGFNLLAKLKSHIQNPSASDLVHFLFTPLNMVVQATGGPELASSVLSPLLTKDVTDFLNYTATA  
 EERKLWMSLGDVWVRAEWPKEQFIPYVPRFRNGWEPPLNFMGAPTEQDMYQLAESVANAHEQRKQD  
 SKRLSTEHSNVSDYPPADGYAYSSSMYHRGPHADHGEAAMPFKSTPNHQVDRNYDAVKTQPKKYAKSKYD  
 FVARNSSSELSVMKDDVLEILDDRRQWWKVRNASGDSGFVNNILDIMRTPESGVGRADPPYTHTIQKQRT  
 EYGLRSADTPSAPSPPTPAPVPVPLPPSVPAPVSVKVPANVTRQNSSSSDGGSIVRDSQRYKQLPVD  
 RRKSQMEEVQDELQRLTIGRSAAQRKFHVPRQNVVINITYDSSPEEVKTLWQSKGFNPVTVNSLGVLN  
 GAQLFSLNKDELRSVCPEGARVFNQITVQKAALSDSNGSSELQEIMRRRQEKISAAASDSGVESFDEGSS  
 H

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-Mlul

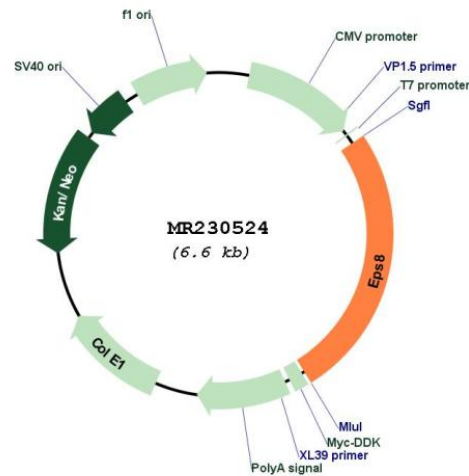
Cloning Scheme:

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN: NM\_001271589

ORF Size: 1683 bp

<b>OTI Disclaimer:</b>	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>
<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_001271589.1</a> , <a href="#">NP_001258518.1</a>
<b>RefSeq Size:</b>	3562 bp
<b>RefSeq ORF:</b>	1686 bp
<b>Locus ID:</b>	13860
<b>UniProt ID:</b>	<a href="#">Q08509</a>
<b>Cytogenetics:</b>	6 66.78 cM
<b>MW:</b>	63.2 kDa

**Gene Summary:**

Signaling adapter that controls various cellular protrusions by regulating actin cytoskeleton dynamics and architecture. Depending on its association with other signal transducers, can regulate different processes. Together with SOS1 and ABI1, forms a trimeric complex that participates in transduction of signals from Ras to Rac by activating the Rac-specific guanine nucleotide exchange factor (GEF) activity. Acts as a direct regulator of actin dynamics by binding actin filaments and has both barbed-end actin filament capping and actin bundling activities depending on the context. Displays barbed-end actin capping activity when associated with ABI1, thereby regulating actin-based motility process: capping activity is auto-inhibited and inhibition is relieved upon ABI1 interaction. Also shows actin bundling activity when associated with BAIAP2, enhancing BAIAP2-dependent membrane extensions and promoting filopodial protrusions. Involved in the regulation of processes such as axonal filopodia growth, stereocilia length, dendritic cell migration and cancer cell migration and invasion. Acts as a regulator of axonal filopodia formation in neurons: in the absence of neurotrophic factors, negatively regulates axonal filopodia formation via actin-capping activity. In contrast, it is phosphorylated in the presence of BDNF leading to inhibition of its actin-capping activity and stimulation of filopodia formation. Component of a complex with WHRN and MYO15A that localizes at stereocilia tips and is required for elongation of the stereocilia actin core. Indirectly involved in cell cycle progression; its degradation following ubiquitination being required during G2 phase to promote cell shape changes. [UniProtKB/Swiss-Prot Function]