

Product datasheet for **MR231250**

Eps8 (NM_001271587) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Eps8 (NM_001271587) 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:

>MR231250 representing NM_001271587
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCTCTCTCAGTCTTGCCTTGACAGTTGCTTGGACGAGTTTTACCTCAGCAGTGCAGGAAGAGGCGTGA
 GAGCCGGCATGAATGGTCATATGTCTAACCGCTCCAGTGGGTATGGAGTCTACCTTCTCAACTGAATGG
 TTACGGATCTTACCACCTATTCACAGATGGACAGAGAACACAGCTCAAGAACAAGTGCAAAGGCCCTT
 TATGAACAAAGGAAGAACTATGCCCGAGACAGTGTGACAGTGTGTCGGACGTGTCCAGTACCGCGTGG
 AACACTTGACCACCTTCGTGCTGGATCGGAAAGATGCAATGATCACTGTCGAGGACGGAATAAGAAAGCT
 GAAGTTGCTGGATGCCAAGGGCAAAGTGTGGACTCAAGATATGATTCTCCAAGTGGATGACCGAGCTGTG
 AGCCTGATTGACTTAGAGTCAAAGAATGAATTGGAGAATTTTCTCTAACACAATCTCGCATTGTCAAG
 CAGTGGTACATGCATGCAGCTATGACTCCATTCTCGCTTGGTATGCAAAGAGCCAACGCAGAGCAAGCC
 AGACCTTCACCTTTCCAGTGTGATGAGGTTAAGGCAAACCTAATTAGTGAAGATATCGAAAGTGAATC
 AGTGACAGTAAAGGTGGGAAACAGAAGAGGCGGCCGAGGCCCTGAGGATGATTGCCAAAGCAGATCCTG
 GCATCCCTCCTCCTCCAGAGCTCCTGCCCTGTGCCACCAGGGACTGTACACAGGTGGACGTTAGGAG
 TCGCGTAGCAGCCTGGTCTGCCTGGGCAGCTGACCAGGGCGACTTCGAGAAGCCCCGGCAGTACCACGAG
 CAAGAAGAGACGCCCGAGATGATGGCAGCCGGATCGACAGGGATGTGCAAACTCTAAACCATATTTTGG
 ATGACATTGAATTTTTATCACCAAACTCCAAAAGCCGCGGAAGCGTTTTCTGAGCTTTCTAAAAGGAA
 GAAAAGTAAGAAAAGTAAAAGGAAAGGACCTGGAGAGGGCGTTTTAACTGAGGGCAAACCCGCCACCT
 CCTGATGAATTTGTTGACTGTTCCAGAAGTTAAACATGGATTCAACCTCTGGCCAAGTTGAAGTCCC
 ATATCCAGAACCAGTCTTCAGATCTGGTTCATTTTTTTACTCCACTAAATATGGTGGTCCAGGC
 AACAGGTGGCCCCGAACCTGGCCAGTTCGGTACTCAGCCACTGTTGACAAAAGACACAGTTGATTTCTTA
 AACTACACAGCCACTGCGGAGGAACGGAAGCTGTGGATGTCAGTGGGAGATAGTTGGGTGAAAGTGAAG
 CAGAGTGGCCGAAAGAACAGTTCATCCCACCTACGTCCCAGGTTCCGCAACGGCTGGGAGCCCCCGAT
 GCTGAACCTCATGGGCGCGCCACAGAGCAAGACATGTATCAACTGGCCGAGTCCGTGGCCAACGCAGAA
 CACCAGCGCAAACAGGACAGCAAGAGGCTGTCCACAGAGCATTCCAATGTGTCCGACTATCTCCAGCCG
 ACGGATATGCGTACAGTACGAGCATGTACCACAGAGGACCACATGCAGACCACGGGGAGGCTGCCATGCC
 TTTCAAGTCAACTCCTAATCACCAAGTAGATAGGAATTATGACGCAGTCAAAACACAACCCAAGAAATAC
 GCCAAATCCAAGTACGACTTTGTGGCGAGGAACAGCAGCGAGCTCTCGGTTATGAAAGATGATGTCTTAG
 AGATACTCGACGATCGAAGGCAGTGGTGGAAAGTCCGGAATGCCAGTGGAGACTCTGGGTTGTGCCAAA
 TAACATTTCTGGATATCATGAGAACTCCGGAATCTGGAGTGGGGCGCGCTGACCCCCATACACATAACC
 ATACAGAAACAAAGGACGGAATACGGCCTGAGATCAGCTGACACTCCTTCTGCCCATCACCCCCTCAA
 CGCCAGCACCCGTTCCGGTCCCCCTCCACCTTGTACCAGCACCCGTTTCTGTGCCAAAGTCCCAGC
 CAATGTCACCCGCGAAGACAGCAGCTCCAGTGCAGTGGGGCAGCATTGTGCGGACAGCCAGAGATAC
 AAACAACCTCCAGTGGACCGAAGGAAGTCCAGATGGAAGAGGTTTCAGGATGAGCTTCCAGAGGCTGA
 CCATCGGGCGCAGTGTGCACAGAGGAAGTCCACGTGCCACGGCAGAACGTTCCAGTGAATCAATATCAC
 TTATGACTCCTCACCGGAAGAAGTAAAGACTTGGCTGCAGTCAAAGGGATTCAACCCCGTACTGTCAAT
 AGCCTCGGGTGTGAAAGGAGCAACTCTTTCTCTCAAAAAGACGAACTGAGGTCTGTCTGCCCGG
 AAGGTGCCAGAGTCTTAAACCAATCACTGTTCAGAAAGCTGCTTTGGAGGACAGTAATGGAAGCTCCGA
 GTTACAAGAGATCATGCGGAGACGGCAGGAGAAGATCAGCGCCGCTGCGAGCGACTCGGGAGTGGAGTCT
 TTCGATGAAGGGAGCAGCCAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR231250 representing NM_001271587
 Red=Cloning site Green=Tags(s)

MLSQSCLDSCLEDFYLSAGRGVRAGMNGHMSNRSSGYGVYPSQLNGYGSSPPYSQMDREHSSRTSAKAL
 YEQRKNYARDSVSSVSDVSQYRVEHLTTFVLDKRDAMITVEDGIRKLLKLLDAKGKVVWTQDMILQVDDRAV
 SLIDLESKNELENFPLNTISHCQAVVHACSYDSILALVCKEPTQSKPDLHLFQCDEVKANLISEDIESAI
 SDSKGGKQKRRPEALRMIKADPGIPPPRAPAPVPPGTVTQVDVRSRVAAWSAWAADQGFQKPRQYHE
 QEETPEMMAARIDRDVQILNHILDDIEFFITKLQKAAEAFSELKRKKSCKSKRKGPGEGVLTLRKPPPP
 PDEFVDCFKFKHGFNLLAKLKSHIQNPSASDLVHFLFTPLNMVVQATGGPELASSVLSPLLTKDTVDL
 NYTATAEERKLWMSLGDSSWVKVRAEWPKEQFIPPYVPRFRNGWEPPMLNFMGAPTEQDMYQLAESVANAE
 HQRKQDSKRLSTEHSNVSDYPPADGYAYSSSMYHRGPHADHGEAAMPFKSTPNHQVDRNYDAVKTPPKY
 AKSKYDFVARNSSSELVSMKDDVLEILDDRRQWWKVRNASGDSGFVPNNILDIMRTPESGVGRADPPYTH
 IQKQRTYGLRSADTPSAPSPPTAPVPVPLPPSVVAPVSVPKVPANVTRQNSSSDSGGSIVRDSQRY
 KQLPVDRRKSQMEEVQDELQRLTIGRSAAQRKFHVPRQNVVINITYDSSPEEVKTLWLSKGFNPVTVN
 SLGVLNGAQLFSLNKDELRSVCPEGARVFNQITVQKAALSDSNGSSELQEMRRRQEKISAAASDSGVES
 FDEGSSH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: Sgfl-MluI

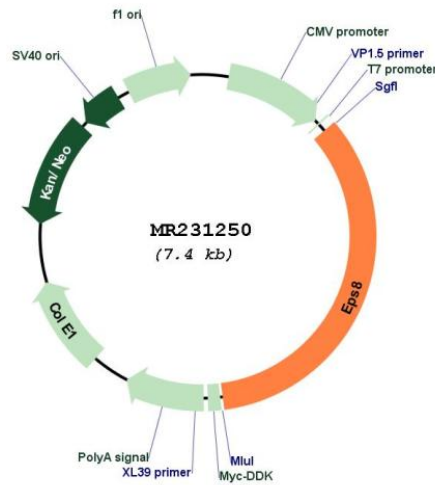
Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN:	NM_001271587
ORF Size:	2541 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:	<ol style="list-style-type: none"> 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_001271587.1 , NP_001258516.1
RefSeq Size:	4561 bp
RefSeq ORF:	2544 bp
Locus ID:	13860
UniProt ID:	Q08509
Cytogenetics:	6 66.78 cM
MW:	94.9 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]