

Product datasheet for **MR231212**

Eps8 (NM_001271595) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Eps8 (NM_001271595) 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:

>MR231212 representing NM_001271595
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGAATGGTCATATGTCTAACCGCTCCAGTGGGTATGGAGTCTACCCTTCTCAACTGAATGGTTACGGAT
CTTCACCAACCCTATTCCAGATGGACAGAGAACACAGCTCAAGAACAAGTGCAAAGGCCCTTTATGAACA
AAGGAAGAACTATGCCCGAGACAGTGTGACAGTGTGTCGGACGTGTCCAGTACCGCGTGAACACTTG
ACCACCTTCGTGCTGGATCGAAAGATGCAATGATCACTGTGAGGACGGAATAAGAAAGCTGAAGTTGC
TGGATGCCAAGGGCAAAGTGTGGACTCAAGATATGATTCTCCAAGTGGATGACCGAGCTGTGAGCCTGAT
TGACTTAGAGTCAAAGAATGAATTGGAGAATTTCTCTAAACACAATCTCGATTGTCAAGCAGTGGTA
CATGCATGCAGCTATGACTCCATTCTCGCCTTGGTATGCAAAGAGCCAACGCAGAGCAAGCCAGACCTTC
ACCTTTTCCAGTGTGATGAGGTTAAGGCAAACCTAATTAGTGAAGATATCGAAAGTGAATCAGTGACAG
TAAAGGTGGGAAACAGAAGAGGGCGCCGAGGCCCTGAGGATGATTGCCAAAGCAGATCCTGGCATCCCT
CCTCTCCAGAGCTCCTGCCCTGTGCCACCAGGGACTGTACACAGGTGGACGTTAGGAGTCCGGTAG
CAGCCTGGTCTGCCTGGGCAGCTGACCAGGGCGACTTCGAGAAGCCCCGGCAGTACCACGAGCAAGAAGA
GACGCCGAGATGATGGCAGCCGGATCGACAGGGATGTGCAAACTCTAAACCATTTTTGGATGACATT
GAATTTTTTATCACAAACTCCAAAAGCCGCCGAAGCGTTTTCTGAGCTTTCTAAAAGGAAGAAAAGTA
AGAAAAGTAAAAGGAAAGGACCTGGAGAGGGCGTTTTAACACTGAGGGCAAACCCACCTCCTGATGA
ATTTGTTGACTGTTTCCAGAAGTTAAACATGGATTCAACCTTCTGGCCAAGTTGAAGTCCCATATCCAG
AACCCGAGTGTTCAGATCTGGTTCATTTTTGTTTACTCCACTAAATATGGTGGTCCAGGCAACAGGTG
GCCCGAAGTGGCCAGTTCGGTACTCAGCCCACTGTTGACAAAAGACACAGTTGATTTCTTAAACTACAC
AGCCACTGCGGAGGAACGGAAGCTGTGGATGTCACTGGGAGATAGTTGGGTGAAAGTGAAGCAGAGTGG
CCGAAAGAACAGTTCATCCACCTTACGTCCCGAGTTCCGCAACGGCTGGGAGCCCCGATGCTGAACT
TCATGGGCGGCCACAGAGCAAGACATGTATCAACTGGCCGAGTCCGTGGCCAACGCAGAACACCAGCG
CAAACAGGACAGCAAGAGGCTGTCCACAGAGCATTCCAATGTGTCCGACTATCCTCCAGCCGACGGAT
GCGTACAGTAGCAGCATGTACCACAGAGGACCACATGCAGACCACGGGGAGGCTGCCATGCCTTTCAAGT
CAACTCCTAATCACCAAGTAGATAGGAATTATGACGCAGTCAAAACACAACCCAAGAAATACGCCAAATC
CAAGTACGACTTTGTGGCGAGGAACAGCAGCGAGCTCTCGGTTATGAAAGATGATGTCTTAGAGATACTC
GACGATCGAAGGCAGTGGTGGAAAGTCCGGAATGCCAGTGGAGACTCTGGGTTTGTGCCAAATAACATTC
TGGATATCATGAGAACTCCGGAATCTGGAGTGGGGCGCGCTGACCCCCATACACACATACCATACAGAA
ACAAAGGACGGAATACGGCCTGAGATCAGCTGACACTCCTTCTGCCCCATCACCCCTCCACGCCAGCA
CCCCTCCGGTCCCCCTCCACCTTCTGTACCAGCACCCGTTTCTGTGCCCAAGTCCCAGCCAATGTCA
CCCGCCAGAACAGCAGCTCCAGTGCAGTGGGGCAGCATTGTGCGGGACAGCCAGAGATACAAACAACT
CCCAGTGGACCGAAGGAAGTCCCAGATGGAAGAGGTTCCAGGATGAGCTCTCCAGAGGCTGACCATCGGG
CGCAGTGTGCACAGAGGAAGTCCACGTGCCACGGCAGAACGTTCCAGTGCATCAATCACTTATGACT
CCTCACCGAAGAAGTAAAGACTTGGCTGCAGTCAAAGGATTCACCCCGTACTGTCAATAGCCTCGG
GGTGTGAACGGAGCACAACTCTTTTCTCAACAAAGACGAACAGGCTGTCTGCCCGAAGTGGC
AGAGTCTTTAACCAAACTACTGTTTCAAGAAAGTCTTTGGAGGACAGTAATGGAAGCTCCGAGTTACAAG
AGATCATGCGGAGACGGCAGGAGAAGATCAGCGCCGCTGCGAGGACTCGGGAGTGGAGTCTTTCGATGA
AGGGAGCAGCCAC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR231212 representing NM_001271595
 Red=Cloning site Green=Tags(s)

MNGHMSNRSSGYGVYPSQLNGYGSSPPYSQMDREHSSRTSAKALYEQRKNYARDSVSSVSDVSQYRVEHL
 TTFVLDKRDAMITVEDGIRKLLKLLDAKGKVTQDMILQVDDRAVSLIDLESKNELENFPLNTISHCQAVV
 HACSYDSILALVCKEPTQSKPDLHLFQCDEVKANLISEDIESAISDSKGGKQKRRPEALRMIKADPGIP
 PPPRAPAPVPPGTVTQVDVRSRVAAWSAWAADQGDFFKPRQYHEQEETPEMMAARIDRDVQILNHILDDI
 EFFITKLQKAAEAFSELSKRKSKKSKRKGPGEGVLTLRKPPPPDEFVDCFQKFKHGFNLLAKLKSHIQ
 NPSASDLVHFLFTPLNMVVQATGGPELASSVLSPLLTKDVTDFLNYTATAEERKLWMSLGDSWVKVRAEW
 PKEQFIPPYVPRFRNGWEPPMLNFMGAPTEQDMYQLAESVANAHEHQRKQDSKRLSTEHSNVSDYPPADGY
 AYSSSMYHRGPHADHGEAAMPFKSTPNHQVDRNYDAVKTQPKKYAKSKYDFVARNSELVSMKDDVLEIL
 DRRRQWWKVRNASGDSGFVPNNILDIMRTPESGVGRADPPYTHTIQKQRTEYGLRSADTPSAPSPPTPA
 PVPVPLPPSVPAPVSVKVPANVTRQNSSSDSGGSIVRDSQRYKQLPVDRRKSQMEEVQDELFRQLTIG
 RSAAQRFHVPRQNVPVINITYDSSPEEVKTLQSKGFNPVTVNSLGVLNGAQLFSLNKDELRSVCPEGA
 RVFNQITVQKAALEDNNGSSELQEIMRRRQEKISAAASDSGVESFDEGSSH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: Sgfl-MluI

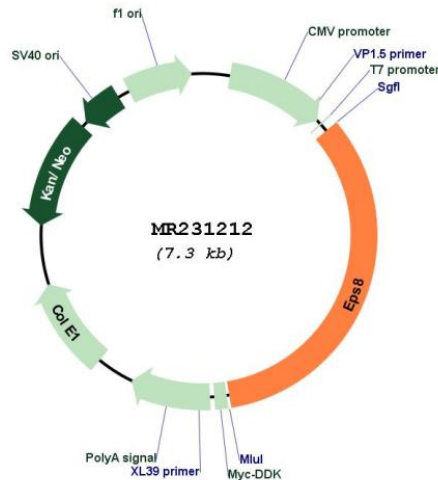
Cloning Scheme:

Cloning sites used for ORF Shutting:



* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN: NM_001271595

ORF Size: 2463 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_001271595.1](#), [NP_001258524.1](#)

RefSeq Size: 4566 bp

RefSeq ORF: 2466 bp

Locus ID: 13860

UniProt ID: [Q08509](#)

Cytogenetics: 6 66.78 cM

MW: 92.2 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]