

Product datasheet for **MG210818**

Eps8 (NM_007945) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Eps8 (NM_007945) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Eps8
Synonyms:	AW261790
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>MG210818 representing NM_007945
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGAATGGTCATATGTCTAACCGCTCCAGTGGGTATGGAGTCTACCCTTCTCAACTGAATGGTTACGGAT
 CTTCAACACCCTATTCCAGATGGACAGAGAACACAGCTCAAGAACAAGTGCAAAGGCCCTTTATGAACA
 AAGGAAGAACTATGCCCGAGACAGTGTACAGAGTGTGTCGGACGTGCCAGTACCGCGTGAACACTTG
 ACCACCTTCGTGCTGGATCGAAAGATGCAATGATCACTGTGAGGACGGAATAAGAAAGCTGAAGTTGC
 TGGATGCCAAGGGCAAAGTGTGGACTCAAGATATGATTCTCCAAGTGGATGACCGAGCTGTGAGCCTGAT
 TGACTTAGAGTCAAAGAATGAATTGGAGAATTTCTCTAAACACAATCTCGATTGTCAAGCAGTGGTG
 CATGCATGCAGCTATGACTCCATTCTCGCCTTGGTATGCAAAGAGCCAACGCAGAGCAAGCCAGACCTTC
 ACCTTTTCCAGTGTGATGAGGTTAAGGCAAACCTAATTAGTGAAGATATCGAAAGTGAATCAGTGACAG
 TAAAGGTGGGAAACAGAAGAGGGCGCCGAGGCCCTGAGGATGATTGCCAAAGCAGATCCTGGCATCCCT
 CCTCCTCCAGAGCTCCTGCCCTGTGCCACCGGGGACTGTCACACAGGTGGACGTTAGGAGTCCGGTAG
 CAGCCTGGTCTGCCTGGGCAGCTGACCAGGGTACTTCGAGAAGCCCCGGCAGTACCACGAGCAAGAAGA
 GACGCCGAGATGATGGCAGCCGGATCGACAGGGATGTGCAAATCTTAAACCATTTTTGGATGACATT
 GAATTTTTTATCACCAAACCTCAAAAAGCCGCCGAAGCGTTTTCTGAGCTTTCTAAAAGGAAGAAAAGTA
 AGAAAAGTAAAAGGAAAGGACCTGGAGAGGGCGTTTTAACACTGAGGGCAAAACCCACCTCCTGACGA
 GTTTGTTGACTGTTTCCAGAAGTTAACATGGATTCAACCTTCTGGCCAAGTTGAAGTCCCATATCCAG
 AACCCGAGTGTTCAGATCTGGTTCATTTTTGTTTACTCCACTAAATATGGTGGTCCAGGCAACAGGTG
 GCCCTGAACGGCCAGTTCGGTACTCAGCCCACTGTTGACAAAAGACACAGTTGATTTCTTAAACTACAC
 AGCCACTGCGGAGGAACGGAAGCTGTGGATGTCACTGGGAGATAGTTGGGTGAAAGTGAAGCAGAGTGG
 CCGAAAGAACAGTTCATCCACCTTACGTCCCGAGGTTCCGCAACGGCTGGGAGCCCCGATGCTGAACT
 TCATGGGCGCGCCACAGAGCAAGACATGTATCAACTGGCCGAGTCCGTGGCCAACGCAGAACACCAGCG
 CAAACAGGACAGCAAGAGGCTGTCCACAGAGCATTCCAATGTGTCCGACTATCCTCCAGCCGACGGATAT
 GCGTACAGTAGCAGCATGTACCACAGAGGACCACATGCAGACCACGGGGAGGCTGCCATGCCTTTCAAGT
 CAACTCCTAATCACCAAGTAGATAGGAATTATGACGCAGTCAAAACACAACCCAAGAAATACGCCAAATC
 CAAGTACGACTTTGTGGCGAGGAACAGCAGCGAGCTCTCGGTTATGAAAGATGATGTCTTAGAGATACTC
 GACGATCGAAGGCAGTGGTGGAAAGTCCGGAATGCCAGTGGAGACTCTGGGTTTGTGCCAAATAACATTC
 TGGATATCATGAGAACTCCAGAATCTGGAGTGGGGCGCGCTGACCCCCATACACACATACCATACAGAA
 ACAAAGGACGGAATACGGCCTGAGATCAGCTGACACTCCTTCTGCCCCATCACCCCTCCACGCCAGCA
 CCCGTTCCGGTCCCCCTTCCACCTTCTGTACCAGCACCCGTTTCTGTGCCCAAGTTCCAGCAGATGTCA
 CCCGCCAGAACAGCAGCTCCAGTGCAGTGGGGGACGATTGTGCGGGACAGCCAGAGATACAAACAACT
 CCCAGTGGACCGAAGGAAGTCCCAGATGGAAGAGGTTCCAGGATGAGCTCTTCCAGAGGCTGACCATCGGG
 CGCAGTGTGCGCAGAGGAAGTCCACGTGCCACGGCAGAACGTTCCAGTGCATCAATCACTTATGACT
 CCTCACCGAAGAAGTAAAGACTTGGCTGCAGTCAAAGGATTCAATCCCGTACTGTCAATAGCCTCGG
 GGTGTTGAACGGAGCACAACCTTTTTCTCTCAACAAAGACGAACAGGCTGTCTGCCCGAAGGTGCC
 AGAGTCTTTAACCAAATCACTGTTCCAGAAAGCTGCTTTGGAGGACAGTAATGGAAGCTCCGAGTTACAAG
 AGATCATGCGGAGACGGCAGGAGAAGATCAGCGCCGCTGCGAGGACTCGGGAGTGGAGTCTTTTATGA
 AGGGAGCAGCCAC

ACCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG210818 representing NM_007945
 Red=Cloning site Green=Tags(s)

MNGHMSNRSSGYGVYPSQLNGYGSSPPYSQMDREHSSRTSAKALYEQRKNYARDSVSSVSDVSQYRVEHL
 TTFVLDKRDAMITVEDGIRKLLKLLDAKGKVTQDMILQVDDRAVSLIDLESKNELENFPLNTISHCQAVV
 HACSYDSILALVCKEPTQSKPDLHLFQCDEVKANLISEDIESAISDSKGGKQKRRPEALRMIKADPGIP
 PPPRAPAPVPPGTVTQVDVRSRVAAWSAWAADQGDFFKPRQYHEQEETPEMMAARIDRDVQILNHILDDI
 EFFITKLQKAAEAFSELSKRKSKKSKRKGPGEGVLTLRKAKPPPDEFVDCFQKFKHGFNLLAKLKSHIQ
 NPSASDLVHFLFTPLNMVVQATGGPELASSVLSPLLTKDTVDFLNYTATAEERKLWMSLGDSWVKVRAEW
 PKEQFIPPYVPRFRNGWEPPMLNFMGAPTEQDMYQLAESVANAHEHQRKQDSKRLSTEHSNVSDYPPADGY
 AYSSSMYHRGPHADHGEAAMPFKSTPNHQVDRNYDAVKTQPKKYAKSKYDFVARNSELVSMKDDVLEIL
 DRRRQWWKVRNASGDSGFVPNNILDIMRTPESGVGRADPPYTHTIQKQRTEYGLRSADTPSAPSPPTPA
 PVPVPLPPSVPAPVSVKVPADVTRQNSSSDSGGSIVRDSQRYKQLPVDRRKSQMEEVQDELFRQLTIG
 RSAAQRFHVPRQNVPVINITYDSSPEEVKTLQSKGFNPVTVNSLGVLNGAQLFSLNKDELRSVCPEGA
 RVFNQITVQKAALEDNNGSSELQEIMRRRQEKISAAASDSGVESFDEGSSH

TRTRPLE - GFP Tag - V

Restriction Sites: Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



EcoRI
BamHI *KpnI*
RBS
Kozac
Consensus
SgfI
AscI

CTATAGGGCGGCCGGGAATTCGTGACTGGATCCGGTACCGAGSAGATCTGCCGCCGATCGCCGGCGCCAGATCT

HindIII
NheI *RsrII*
MluI
NotI
XhoI
GFP Tag

CAAGCTTAAGCTAGCTAGCGGACCG ACG CGT ACG CGG CCG CTC GAG ATG GAG AGC GAC --- --- ---

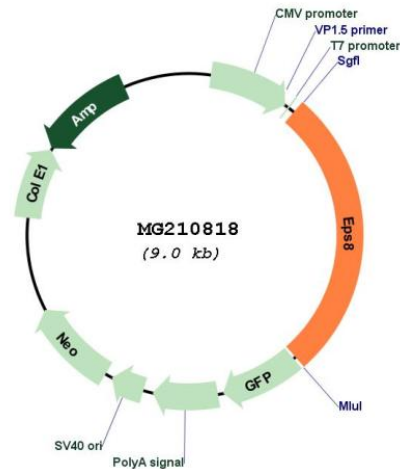
T R T R P L E
M E S D - - -

PmeI
FseI

--- --- GAA GAA AGA GTT TAA ACGGCCGGCCGGGAGCT

- - - E E R V Stop

Plasmid Map:



ACCN: NM_007945

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_007945.1](#)

RefSeq Size: 4402 bp

RefSeq ORF: 2466 bp

Locus ID: 13860

UniProt ID: [Q08509](#)

Cytogenetics: 6 66.78 cM

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]