

Product datasheet for **MR230510**

Eya1 (NM_001252192) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Eya1 (NM_001252192) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Eya1
Synonyms:	bor
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide Sequence:

>MR230510 representing NM_001252192
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTTGCTCTTTCTCAAGTTGCAGTTAAACAGAGCCAATGAGCAGCAGTGAAATAGTCTCAACAGCAG
 CAGACGGGTCTTTAGACAGTTTCTCAGGTTGAGCTCTCGGAAGCAGCAGCTTTAGTCCAAGACCAGCTCA
 CCCGTTCTCTCCACCACAGATTTATCCTTCCAATCATACCCACATATTCTCCCTACCCCTTCTCACAA
 ACTATGGCTGCATATGGGCAAACACAGTTTACCACAGGAATGCAACAAGCCACAGCCTACGCCACGTACC
 CACAGCCTGGACAGCCCTATGGAATTTCTCCTATGGTGCATTGTGGCAGGCATCAAGACGAAAGTGG
 ATTGTCACAGTCTCAGTACCTGGACAGACGGATTTCTTAGCTATGGCACAAGCTTTGGTACCCCTCAA
 CCTGGACAGGCACCGTACAGTACCAGATGCAAGGTAGCAGCTTACCACGTCATCAGGATTATATTCAG
 GAAATAATCACTACCAACTCCTCCGGATTCAACAGTTCACAGCAGGACTATCCGTCTTATCCCGGCTT
 TGGCCAGGGTCAGTACGCACAGTATTATAACAGCTCGCCGTATCCAGCACACTACATGACGAGCAGTAAC
 ACCAGCCCAGCCACACCGTCCACCAATGCCACTTACCAACTCCAGGAACCACTTCTGGCGTCACAAGTC
 AGGCGGTACAGACCCACAGCAGAGTACAGTACAATCCACAGTCTTCCACACCCATTAAGAGACTGA
 CTCCGAGCGGCTGCGTCGAGGTTTCCAGATGGGAAGTACAGTGGCCGAGGCAGAAGAAAATAATCCCTCC
 CCTCCCCGGATTCTGACCTTGAGAGAGTGTTCATCTGGGACCTGGACGAGACCATCATTGTTTTCCACT
 CCTTGCTCACGGGGTCTACGCCAACAGATACGGGAGGGATCCACCTACTTCTGTTTTCCCTGGGACTACG
 AATGGAAGAGATGATTTTCAACTGGCAGACACACATCTATTTTCAATGACCTAGAAGAGTGTGACCAA
 GTCCATATAGATGATTTTATCAGACGACAACGGCCAGGACCTGAGCACATACAACTTTGGAACAGATG
 GCTTTCTGCTGCAGCCACAGTGTCTAATTTATGCCTGGCAACTGGTGTCCGAGGTGGTGTGGCAGTGGAT
 GCGGAAACTGGCCTCCGCTACAGACGAGTAAAAGAGATCTACAACACCTACAAAAACAAGTGGGAGGT
 CTGCTTGCCAGCTAAGAGGGAAGCCTGGCTCCAGCTGAGGGCTGAGATTGAGGCACTCACAGACTCCT
 GGCTGACCCTGGCCCTGAAGGCCCTCTCCCTCATCCACTCCCGGACGAACTGTGTGAATATTTAGTAAC
 AACTACGAGCTCATCCAGCATTGGCAAAAGTCTGCTATATGGATTAGGAATTGTGTTTCCAATAGAA
 AATATTTACAGTGAACATAAATAGGAAAGGAAAGCTGTTTTGAGAGGATAATCCAAAGTTTGGAAAGGA
 AAGTGGTATACGTTGTCATAGGAGATGGTGTGGAAGAAGCAAGGGGCAAAAAAGCATGCTATGCCCTT
 CTGGAGGGTCTCCAGTCACTCGGACCTCATGGCACTGCATCATGCCTTGAATTAGAGTACCTG

**ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA**

Protein Sequence:

>MR230510 representing NM_001252192
 Red=Cloning site Green=Tags(s)

MLLFPQVAVKTEPMSSEIASTAADGSLDSFSGSALGSSSFSPRPAHPFSPPIYPSKSYPHILPTPSSQ
 TMAAYGQTQFTTGMQQATAYATYPQPGQPYGISSYGALWAGIKTESGLSQQSPGQTGFLSYGTSFGTGP
 PGQAPYSYQMGSSTTSGLYSGNNSLTNSSGFNSQDYPSPYGFQQQYAYQYNSSPYAHYMTSSN
 TSPTTSTNATYQLQEPSPGVTSQAVTDPATAEYSTIHPSTPIKETDSERLRRGSDGKSRGRRRNNPS
 PPPDSLDERVFIWDLDETIIVFHSLLTGSYANRYGRDPPTSVSLGLRMEEMIFNLADTHLFFNDLEEDQ
 VHIDDVSSDDNGQDLSTYNFGTDGFPAATSANLCLATGVRGGVDWMRKLAFRYRRVKEIYNTYKNNVGG
 LLGPAKREAWLQLRAEIEALTDSWLTALALSLIHSRTNCVNILVTTTQLIPALAKVLLYGLGIVFPIE
 NIYSATKIGKESCFERIIQRFRKVVVVVIGDGVVEEQGAKKHAMPFWRVSSHSDLMALHHALELEYL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-Mlul

ACCN:	NM_001252192
ORF Size:	1674 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_001252192.1 , NP_001239121.1
RefSeq Size:	4238 bp
RefSeq ORF:	1677 bp
Locus ID:	14048
Cytogenetics:	1 4.31 cM
MW:	61.4 kDa
Gene Summary:	Functions both as protein phosphatase and as transcriptional coactivator for SIX1, and probably also for SIX2, SIX4 and SIX5 (PubMed:10490620). Tyrosine phosphatase that dephosphorylates 'Tyr-142' of histone H2AX (H2AXY142ph) and promotes efficient DNA repair via the recruitment of DNA repair complexes containing MDC1. 'Tyr-142' phosphorylation of histone H2AX plays a central role in DNA repair and acts as a mark that distinguishes between apoptotic and repair responses to genotoxic stress (PubMed:19234442). Its function as histone phosphatase may contribute to its function in transcription regulation during organogenesis (PubMed:14628042). Has also phosphatase activity with proteins phosphorylated on Ser and Thr residues (in vitro). Required for normal embryonic development of the craniofacial and trunk skeleton, kidneys and ears (PubMed:10471511). Together with SIX1, it plays an important role in hypaxial muscle development; in this it is functionally redundant with EYA2 (PubMed:17098221).[UniProtKB/Swiss-Prot Function]