

Product datasheet for **MC228299**

Eya1 (NM_001252192) Mouse Untagged Clone

Product data:

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



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Fully Sequenced ORF: >MC228299 representing NM_001252192
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTTGCTCTTTCTCAAGTTGCAGTTAAACAGAGCCAATGAGCAGCAGTGAAATAGTCTCAACAGCAG
 CAGACGGGTCTTTAGACAGTTTCTCAGGTTGAGCTCTCGGAAGCAGCAGCTTTAGTCCAAGACCAGCTCA
 CCCGTTCTCTCCACCACAGATTTATCCTTCCAATCATACCCACATATTCTCCCTACCCCTTCTCACAA
 ACTATGGCTGCATATGGGCAAACACAGTTTACCACAGGAATGCAACAAGCCACAGCCTACGCCACGTACC
 CACAGCCTGGACAGCCCTATGGAATTTCTCCTATGGTGCATTGTGGCAGGCATCAAGACGGAAAGTGG
 ATTGTCACAGTCTCAGTCACCTGGACAGACGGATTTCTTAGCTATGGCACAAGCTTTGGTACCCCTCAA
 CCTGGACAGGCACCGTACAGTACCAGATGCAAGGTAGCAGCTTTACCACGTCATCAGGATTATATTCAG
 GAAATAATCACTACCAACTCCTCCGGATTCAACAGTTCACAGCAGGACTATCCGTCTTATCCCGGCTT
 TGGCCAGGGTCAGTACGCACAGTATTATAACAGCTCGCGTATCCAGCACACTACATGACGAGCAGTAAC
 ACCAGCCCAGCCACCGTCCACCAATGCCACTTACCAACTCCAGGAACACCTTCTGGCGTCACAAGTC
 AGGCGGTACAGACCCACAGCAGAGTACAGTACAATCCACAGTCTTCCACACCCATTAAGAGACTGA
 CTCCGAGCGGCTGCGTCGAGGTTGAGTGGGAAGTACAGTGGCCGAGGCAGAAGAAAATAATCCCTCC
 CCTCCCCGGATTCTGACCTTGAGAGAGTGTTCATCTGGGACCTGGACGAGACCATCATTGTTTTCCACT
 CCTTGCTCACGGGGTCTACGCCAACAGATACGGGAGGGATCCACCTACTTCTGTTTCCCTGGGACTACG
 AATGGAAGAGATGATTTTCAACTGGCAGACACACATCTATTTTCAATGACCTAGAAGAGTGTGACCAA
 GTCCATATAGATGATGTTTCATCAGACGACAACGGCCAGGACCTGAGCACATACAACTTTGGAACAGATG
 GCTTTCCTGCTGCAGCCACAGTGTCTAATTTATGCCTGGCAACTGGTGTCCGAGGTGGTGGACTGGAT
 GCGGAAACTGGCCTTCCGCTACAGACGAGTAAAAGAGATCTACAACACCTACAAAAACAACGTGGGAGGT
 CTGCTTGCCAGCTAAGAGGGAAGCCTGGCTCCAGCTGAGGGCTGAGATTGAGGCACTCACAGACTCCT
 GGCTGACCCTGGCCCTGAAGGCCCTCTCCCTCATCCACTCCCGGACGAACTGTGTGAATATTTAGTAAC
 AACTACGAGCTCATCCAGCATTGGCAAAAGTCTGCTATATGGATTAGGAATTGTGTTTCCAATAGAA
 AATATTTACAGTGAACATAAATAGGAAAGGAAAGCTGTTTTGAGAGGATAATCCAAAGGTTTGGAAAGGA
 AAGTGGTATACGTTGTCATAGGAGATGGTGTGGAAGAAGAGCAAGGGGCAAAAAAGCATGCTATGCCCTT
 CTGGAGGGTCTCCAGTCACTCGGACCTCATGGCACTGCATCATGCCTTGAATTAGAGTACCTG**TAA**

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** SgfI-MluI
- ACCN:** NM_001252192
- Insert Size:** 1677 bp
- OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
- OTI Annotation:** Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.
- 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_001252192.1](#), [NP_001239121.1](#)

RefSeq Size: 4238 bp

RefSeq ORF: 1677 bp

Locus ID: 14048

Cytogenetics: 1 4.31 cM

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]
Transcript Variant: This variant (2) lacks an in-frame segment in the 5' coding region and uses a different start codon compared to variant 3. The resulting isoform (2) contains a shorter and distinct N-terminus, compared to isoform 3.