

Product datasheet for **MG209161**

Eya1 (NM_010164) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Eya1 (NM_010164) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Eya1
Synonyms:	bor
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG209161 representing NM_010164
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGCAGGATCTAACCAGCCCGCATAGCCGACTGAGTGGTAGTAGCGAATCCCCAGTGGTCCCAAACCTCG
 ATAGCTCTCATATAAATAGTACTTCCATGACTCCCAATGGCACCAGGAAATAAAACAGAGCCAATGAGCAG
 CAGTGAATAGCTTCAACAGCAGCAGACGGGTCTTTAGACAGTTTCTCAGGTTCACTCTCGGAAGCAGC
 AGCTTTAGTCCAAGACCAGCTCACCCGTTCTCTCCACCACAGATTTATCCTTCCAACAGATCATACCCAC
 ATATTCTCCCTACCCCTTCTCACAAATATGGCTGCATATGGGCAAACACAGTTTACCACAGGAATGCA
 ACAAGCCACAGCCTACGCCACGTACCCACAGCCTGGACAGCCCTATGGAATTTCTCCTATGGCATCAAG
 ACGGAAAGTGGATTGTCACAGTCTCAGTCACTGGACAGACGGGATTTCTTAGCTATGGCACAAGCTTTG
 GTACCCCTCAACCTGGACAGGCACCGTACAGTACCAGATGCAAGGTAGCAGCTTTACCACGTATCAGG
 ATTATATTCAGGAAATAATTCACCTACCAACTCCTCCGGATTCAACAGTTCACAGCAGGACTATCCGTCT
 TATCCCGGCTTTGGCCAGGGTCAGTACGCACAGTATTATAACAGCTCGCCGATCCAGCACACTACATGA
 CGAGCAGTAACACCAGCCGACCACACCGTCCACCAATGCCACTTACCAACTCCAGGAACCACCTTCTGG
 CGTCACAAGTCAAGCGGTACAGACCCACAGCAGAGTACAGTACAATCCACAGTCTTCCACACCCATT
 AAAGAGACTGACTCCGAGCGGCTGCGTCGAGGTTGAGTGGGAAGTCACTGGCCGAGGCAGAAGAAACA
 ATAATCCCTCCCTCCCGGATTTGACCTTGAGAGAGTGTTCATCTGGGACCTGGACGAGACCATCAT
 TGTTTTCCACTCCTTGCTCACGGGTCTACGCCAACAGATACGGGAGGGATCCACCTACTTCTGTTTCC
 CTGGGACTACGAATGGAAGAGATGATTTTCAACTGGCAGACACACATCTATTTTTCAATGACCTAGAAG
 AGTGTGACCAAGTCCATATAGATGATGTTTTCATCAGACGACAACGGCCAGGACCTGAGCAGATCAACT
 TGGAACAGATGGCTTTCTGCTGCAGCCACAGTGTAAATTTATGCCTGGCAACTGGTGTCCGAGGTGGT
 GTGGACTGGATGCGGAACTGGCCTCCGCTACAGACGAGTAAAAGAGATCTACAACACCTACAAAAACA
 ACGTGGGAGGTCTGCTTGGCCAGCTAAGAGGGAAGCCTGGTCCAGCTGAGGGCTGAGATTGAGGCACT
 CACAGACTCCTGGCTGACCCTGGCCCTGAAGGCCCTCTCCCTCATCCACTCCCGGACGAAGTGTGTGAAT
 ATTTTAGTAACAACACTACGAGCTCATCCAGCATTGGCAAAGTCTGCTATATGGATTAGGAATTGTGT
 TTCCAATAGAAAATTTTACAGTCAACTAAAATAGGAAAGGAAAGCTGTTTTGAGAGGATAATCCAAAG
 GTTTGGAAGGAAAGTGGTATACGTTGTCATAGGAGATGGTGTGGAAGAAGAGCAAGGGGCAAAAAGCAT
 GCTATGCCCTTCTGGAGGTCTCCAGTCACTCGGACCTCATGGCACTGCATCATGCCTTGAATTAGAGT
 ACCTG

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>MG209161 representing NM_010164
 Red=Cloning site Green=Tags(s)

MQDLTSPHSRLSGSSESPSGPKLDSSHINSTMTPNGTEVKTEPMSSEIASTAADGSLDSFSGSALGSS
 SFSPRPAHPFSPQIYPSNRSYPHILPTPSSQTMAAYGQTQFTTGMQQATAYATYPQPGQPYGISSYGIK
 TESGLSQSQSPGQTGFLSYGTSFGTPQPGQAPYSYQMGGSSFTTSSGLYSGNNSLTNSSGFNSSQDYP
 YPGFGQQYAQYNNSSPYPAHYMTSSNTSPTTPSTNATYQLQEPSPGVTSQAVTDPTAEYSTIHSPTPI
 KETDSELRRLRRGSDGKSRGRGRRNNPSPPPDSLDERVF IWDLDETIIVFHSLLTGSYANRYGRDPPTS
 VSLGLRMEEMIFNLADTHLFFNDLEEDQVHIDDVSSDDNGQDLSTYNFGTDGFPAAATSANLCLATGVRGG
 VDWMRKLAFRYRRVKEIYNTYKNNVGGLLGPAKREAWLQLRAEIEALTDSWLTALKALSLIHSRTNCVN
 ILVTTTQLIPALAKVLLYGLGIVFPIENIYSATKIGKESCFERIIQRFRGRKVVVYVIGDGVVEEQGAKKH
 AMPFWRVSSHSDLMALHHALELEYL

TRTRPLE – GFP Tag – V

Restriction Sites:

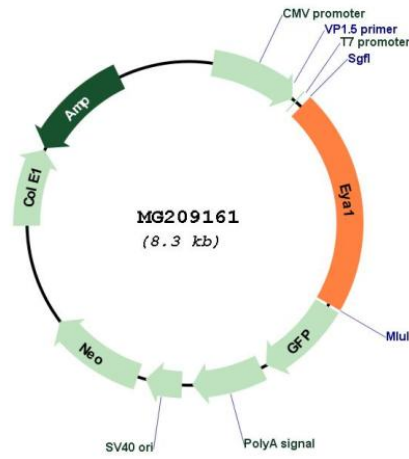
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM_010164
ORF Size: 1761 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_010164.2 , NP_034294.2
RefSeq Size:	4354 bp
RefSeq ORF:	1764 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]