10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

EYA1 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12446a

Product Information

Application	WB, E
Primary Accession	Q99502
Other Accession	P97767, NP_000494.2, NP_742057.1, NP_742055.1
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB31192
Calculated MW	64593
Antigen Region	1-30

Additional Information

Gene ID	2138
Other Names	Eyes absent homolog 1, EYA1
Target/Specificity	This EYA1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human EYA1.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	EYA1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	EYA1
Function	Functions both as protein phosphatase and as transcriptional coactivator for SIX1, and probably also for SIX2, SIX4 and SIX5 (By similarity). 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 (By similarity). Also has phosphatase activity with proteins phosphorylated on Ser and Thr residues (in vitro) (By similarity). Required for normal embryonic development of the craniofacial and trunk skeleton, kidneys and ears (By similarity). Together with SIX1, it plays an important role in hypaxial muscle development; in this it is functionally redundant with EYA2 (By similarity).
Cellular Location	Cytoplasm. Nucleus Note=Localizes at sites of DNA damage at double-strand breaks (DSBs)
Tissue Location	In the embryo, highly expressed in kidney with lower levels in brain. Weakly expressed in lung. In the adult, highly expressed in heart and skeletal muscle. Weakly expressed in brain and liver. No expression in eye or kidney

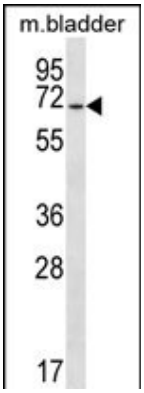
Background

This gene encodes a member of the eyes absent (EYA) family of proteins. The encoded protein may play a role in the developing kidney, branchial arches, eye, and ear. Mutations of this gene have been associated with branchiootorenal dysplasia syndrome, branchiootic syndrome, and sporadic cases of congenital cataracts and ocular anterior segment anomalies. A similar protein in mice can act as a transcriptional activator. Four transcript variants encoding three distinct isoforms have been identified for this gene.

References

Jugessur, A., et al. PLoS ONE 5 (7), E11493 (2010) :
Lin, L., et al. Zhonghua Zheng Xing Wai Ke Za Zhi 25(6):436-439(2009)
Drake, K.M., et al. Clin. Cancer Res. 15(19):5985-5992(2009)
Patrick, A.N., et al. J. Biol. Chem. 284(31):20781-20790(2009)
Lee, J.D., et al. Ann. Clin. Lab. Sci. 39(3):303-306(2009)

Images



EYA1 Antibody (N-term) (Cat. #AP12446a) western blot analysis in mouse bladder tissue lysates (35ug/lane).This demonstrates the EYA1 antibody detected the EYA1 protein (arrow).