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EYA2 Rabbit mAb

Catalog # AP76490

Product Information

Application	WB
Primary Accession	O00167
Reactivity	Human
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	59232

Additional Information

Gene ID	2139
Other Names	EYA2
Dilution	WB~~1:1000
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

Name	EYA2
Synonyms	EAB1
Function	Functions both as protein phosphatase and as transcriptional coactivator for SIX1, and probably also for SIX2, SIX4 and SIX5 (PubMed:12500905, PubMed:23435380). 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:19351884). Its function as histone phosphatase may contribute to its function in transcription regulation during organogenesis. Plays an important role in hypaxial muscle development together with SIX1 and DACH2; in this it is functionally redundant with EYA1 (PubMed:12500905).

Cellular Location	Cytoplasm. Nucleus Note=Retained in the cytoplasm via interaction with GNAZ and GNAI2 (PubMed:10906137). Interaction with SIX1, SIX2, SIX4 or SIX5 is required for translocation to the nucleus (PubMed:10906137, PubMed:12500905).
Tissue Location	Highest expression in muscle with lower levels in kidney, placenta, pancreas, brain and heart

Background

Tyrosine phosphatase that specifically dephosphorylates 'Tyr-142' of histone H2AX (H2AXY142ph). '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. Promotes efficient DNA repair by dephosphorylating H2AX, promoting the recruitment of DNA repair complexes containing MDC1. Its function as histone phosphatase probably explains its role in transcription regulation during organogenesis. Coactivates SIX1. Seems to coactivate SIX2, SIX4 and SIX5. Together with SIX1 and DACH2 seem to be involved in myogenesis. May be involved in development of the eye. Interaction with GNAZ and GNAI2 prevents nuclear translocation and transcriptional activity.