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Aldolase (ALDOA) Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5238

Product Information

Application	IHC-P, WB
Primary Accession	P04075
Other Accession	P05065, P00883, P05064
Reactivity	Human, Mouse, Rat
Predicted	Rabbit
Host	Rabbit
Clonality	Polyclonal
Calculated MW	39420
Isotype	Rabbit IgG
Antigen Source	HUMAN

Additional Information

Gene ID	226
Antigen Region	66-95
Other Names	ALDOA; ALDA; Fructose-bisphosphate aldolase A; Lung cancer antigen NY-LU-1; Muscle-type aldolase
Dilution	IHC-P~~1:100~500 WB~~1:1000
Target/Specificity	This Aldolase (ALDOA) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 66-95 amino acids from the N-terminal region of human Aldolase (ALDOA).
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
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	Aldolase (ALDOA) Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ALDOA (HGNC:414)
Synonyms	ALDA

Function	Catalyzes the reversible conversion of beta-D-fructose 1,6- bisphosphate (FBP) into two triose phosphate and plays a key role in glycolysis and gluconeogenesis (PubMed:14766013). In addition, also functions as a scaffolding protein (By similarity). In response to glucose deprivation, FBP dissociates from aldolase and acts as an adapter that promotes AMP-activated protein kinase (AMPK) activity: mechanistically, associates with transient receptor potential channels TrpV (TRPV1-TRPV4), promoting inhibition of the V-ATPase complex on lysosomes and AMPK activation via the AXIN1-STK11/LKB1 axis (By similarity).
Cellular Location	Cytoplasm, myofibril, sarcomere, I band {ECO:0000250|UniProtKB:P00883}. Cytoplasm, myofibril, sarcomere, M line {ECO:0000250|UniProtKB:P00883}. Note=In skeletal muscle, accumulates around the M line and within the I band, colocalizing with FBP2 on both sides of the Z line in the absence of Ca(2+) {ECO:0000250|UniProtKB:P00883}

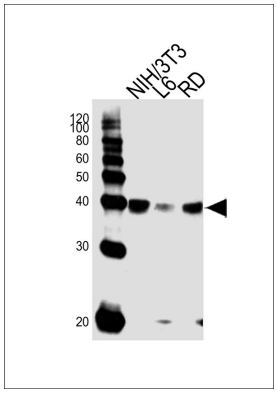
Background

Aldolase A (fructose-bisphosphate aldolase) is a glycolytic enzyme that catalyzes the reversible conversion of fructose-1,6-bisphosphate to glyceraldehyde 3-phosphate and dihydroxyacetone phosphate. Three aldolase isozymes (A, B, and C), encoded by three different genes, are differentially expressed during development. Aldolase A is found in the developing embryo and is produced in even greater amounts in adult muscle. Aldolase A expression is repressed in adult liver, kidney and intestine and similar to aldolase C levels in brain and other nervous tissue. Aldolase A deficiency has been associated with myopathy and hemolytic anemia.

References

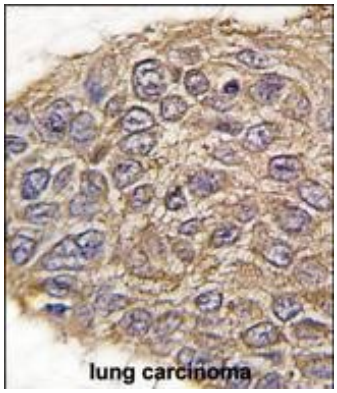
Gizak,A., Proteins 72 (1), 209-216 (2008)
Lu,J., Biochem. Biophys. Res. Commun. 369 (3), 948-952 (2008)
Valis,K., Mol. Cell. Biochem. 311 (1-2), 225-231 (2008)

Images



Western blot analysis of lysates from mouse NIH/3T3,rat L6,RD cell line (from left to right), using ALDOA Antibody (N-term)(Cat. #AW5238). AW5238 was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody.

Formalin-fixed and paraffin-embedded human lung carcinoma tissue reacted with ALDOA antibody (N-term) (Cat.#AW5238), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



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