

[KO]Aldolase Rabbit mAb

Catalog # AP75051

Product Information

Application	WB, IHC-P, FC
Primary Accession	P04075
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	39420

Additional Information

Gene ID	226
Other Names	ALDOA
Dilution	WB~~1:1000-1:5000 IHC-P~~N/A FC~~1:20-1:50
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

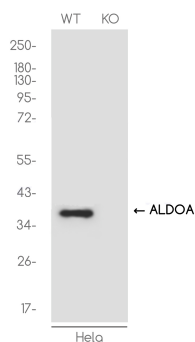
Name	ALDOA (HGNC:414)
Synonyms	ALDA
Function	Catalyzes the reversible conversion of beta-D-fructose 1,6- biphosphate (FBP) into two triose phosphate and plays a key role in glycolysis and gluconeogenesis (PubMed: 14766013). In addition, also functions as a scaffolding protein (By similarity). In response 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}

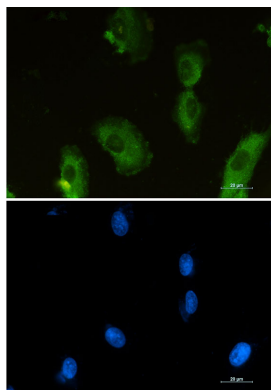
Background

The protein encoded by this gene, 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. Alternative splicing and alternative promoter usage results in multiple transcript variants. Related pseudogenes have been identified on chromosomes 3 and 10.

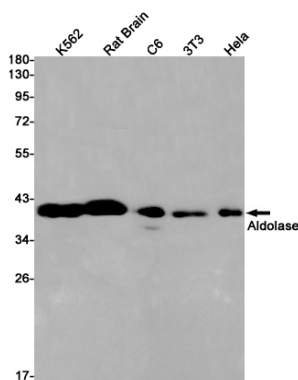
Images



Western blot analysis of ALDOA in HeLa(WT) and ALDOA-Knockout HeLa(KO) using ALDOA antibody.

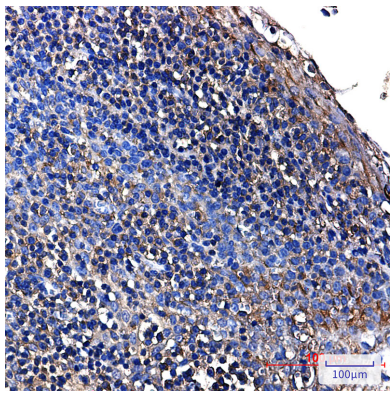


Immunocytochemistry analysis of ALDOA (green) in U87-MG using ALDOA antibody, and DAPI(blue).



Western blot analysis of Aldolase in K562, rat Brain, C6, 3T3, HeLa lysates using Aldolase antibody.

Immunohistochemistry analysis of paraffin-embedded Human tonsil tissue using Aldolase antibody. High-pressure and temperature Sodium Citrate



pH 6.0 was used for antigen retrieval.

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