

## ARG42696 anti-ATP Citrate Lyase antibody [5I2]

Package: 50 µg  
Store at: -20°C

### Summary

Product Description	Mouse Monoclonal antibody [5I2] recognizes ATP Citrate Lyase
Tested Reactivity	Hu, Ms, Rat
Tested Application	FACS, ICC/IF, IHC-P, WB
Host	Mouse
Clonality	Monoclonal
Clone	5I2
Isotype	IgG2b
Target Name	ATP Citrate Lyase
Species	Human
Immunogen	Recombinant protein corresponding to M1-I180 of Human ATP Citrate Lyase.
Conjugation	Un-conjugated
Alternate Names	ACL; ATP-citrate synthase; Citrate cleavage enzyme; CLATP; EC 2.3.3.8; pro-S-; ATP-citrate; ATPCL

### Application Instructions

Application table	Application	Dilution
	FACS	1:150 - 1:500
	ICC/IF	1:200 - 1:1000
	IHC-P	1:200 - 1:1000
	WB	1:500 - 1:2000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Observed Size	~ 120 kDa	

### Properties

Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	0.2% Na <sub>2</sub> HPO <sub>4</sub> , 0.9% NaCl, 0.05% Sodium azide and 4% Trehalose.
Preservative	0.05% Sodium azide
Stabilizer	4% Trehalose
Concentration	0.5 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot

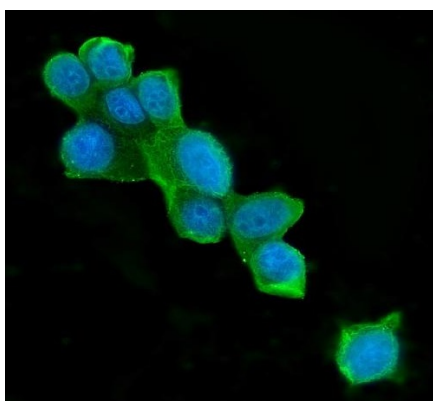
and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

**Note** For laboratory research only, not for drug, diagnostic or other use.

## Bioinformation

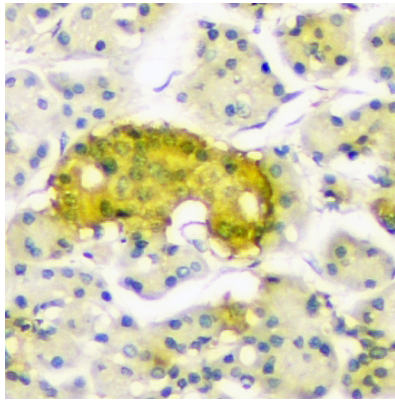
Gene Symbol	ACLY
Gene Full Name	ATP citrate lyase
Background	ATP citrate lyase is the primary enzyme responsible for the synthesis of cytosolic acetyl-CoA in many tissues. The enzyme is a tetramer (relative molecular weight approximately 440,000) of apparently identical subunits. It catalyzes the formation of acetyl-CoA and oxaloacetate from citrate and CoA with a concomitant hydrolysis of ATP to ADP and phosphate. The product, acetyl-CoA, serves several important biosynthetic pathways, including lipogenesis and cholesterologenesis. In nervous tissue, ATP citrate-lyase may be involved in the biosynthesis of acetylcholine. Multiple transcript variants encoding distinct isoforms have been identified for this gene. [provided by RefSeq, Dec 2014]
Function	Catalyzes the cleavage of citrate into oxaloacetate and acetyl-CoA, the latter serving as common substrate for de novo cholesterol and fatty acid synthesis. [UniProt]
Calculated Mw	121 kDa
PTM	ISGylated.  Acetylated at Lys-540, Lys-546 and Lys-554 by KAT2B/PCAF. Acetylation is promoted by glucose and stabilizes the protein, probably by preventing ubiquitination at the same sites. Acetylation promotes de novo lipid synthesis. Deacetylated by SIRT2.  Ubiquitinated at Lys-540, Lys-546 and Lys-554 by UBR4, leading to its degradation. Ubiquitination is probably inhibited by acetylation at same site (Probable). [UniProt]
Cellular Localization	Cytoplasm. [UniProt]

## Images



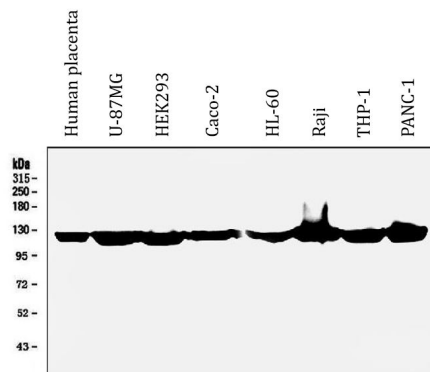
ARG42696 anti-ATP Citrate Lyase antibody [512] ICC/IF image

Immunofluorescence: MCF7 cells were blocked with 10% goat serum and then stained with ARG42696 anti-ATP Citrate Lyase antibody [512] (green) at 2 µg/ml dilution, overnight at 4°C. DAPI (blue) for nuclear staining.



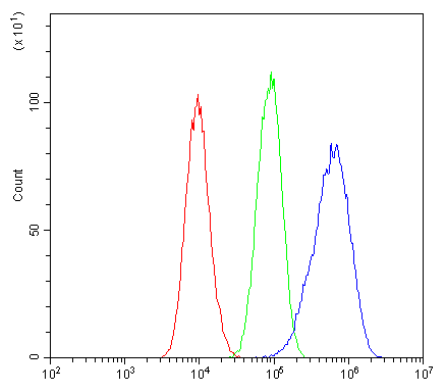
#### ARG42696 anti-ATP Citrate Lyase antibody [5I2] IHC-P image

Immunohistochemistry: Paraffin-embedded Human pancreatic cancer tissue. Antigen Retrieval: Heat mediation was performed in EDTA buffer (pH 8.0). The tissue section was blocked with 10% goat serum. The tissue section was then stained with ARG42696 anti-ATP Citrate Lyase antibody [5I2] at 1 µg/ml dilution, overnight at 4°C.



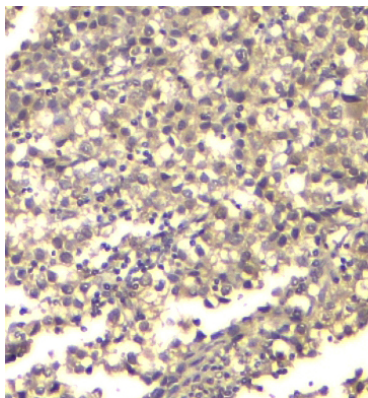
#### ARG42696 anti-ATP Citrate Lyase antibody [5I2] WB image

Western blot: 50 µg of samples under reducing condition. Human placenta, U-87MG, HEK293, Caco-2, HL-60, Raji, THP-1 and PANC-1 whole cell lysates stained with ARG42696 anti-ATP Citrate Lyase antibody [5I2] at 0.5 µg/ml dilution, overnight at 4°C.



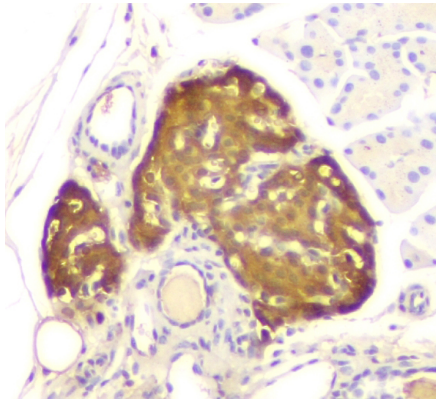
#### ARG42696 anti-ATP Citrate Lyase antibody [5I2] FACS image

Flow Cytometry: A549 cells were blocked with 10% normal goat serum and then stained with ARG42696 anti-ATP Citrate Lyase antibody [5I2] (blue) at 1 µg/10<sup>6</sup> cells for 30 min at 20°C, followed by incubation with DyLight®488 labelled secondary antibody. Isotype control antibody (green) was mouse IgG (1 µg/10<sup>6</sup> cells) used under the same conditions. Unlabelled sample (red) was also used as a control.



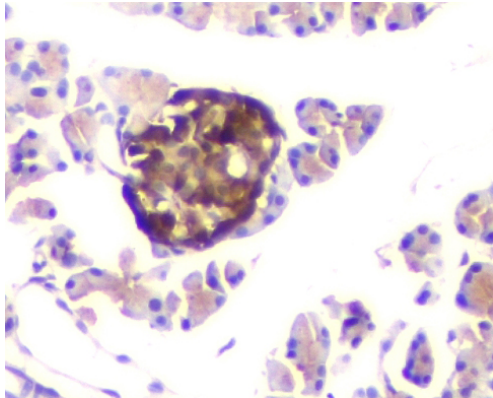
#### ARG42696 anti-ATP Citrate Lyase antibody [5I2] IHC-P image

Immunohistochemistry: Paraffin-embedded Human testis cancer tissue. Antigen Retrieval: Heat mediation was performed in EDTA buffer (pH 8.0). The tissue section was blocked with 10% goat serum. The tissue section was then stained with ARG42696 anti-ATP Citrate Lyase antibody [5I2] at 1 µg/ml dilution, overnight at 4°C.



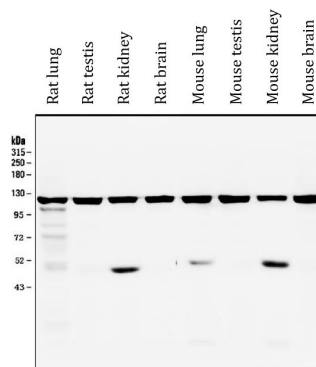
#### ARG42696 anti-ATP Citrate Lyase antibody [5I2] IHC-P image

Immunohistochemistry: Paraffin-embedded Mouse pancreas tissue. Antigen Retrieval: Heat mediation was performed in EDTA buffer (pH 8.0). The tissue section was blocked with 10% goat serum. The tissue section was then stained with ARG42696 anti-ATP Citrate Lyase antibody [5I2] at 1 µg/ml dilution, overnight at 4°C.



#### ARG42696 anti-ATP Citrate Lyase antibody [5I2] IHC-P image

Immunohistochemistry: Paraffin-embedded Rat pancreas tissue. Antigen Retrieval: Heat mediation was performed in EDTA buffer (pH 8.0). The tissue section was blocked with 10% goat serum. The tissue section was then stained with ARG42696 anti-ATP Citrate Lyase antibody [5I2] at 1 µg/ml dilution, overnight at 4°C.



#### ARG42696 anti-ATP Citrate Lyase antibody [5I2] WB image

Western blot: 50 µg of samples under reducing condition. Rat lung, Rat testis, Rat kidney, Rat brain, Mouse lung, Mouse testis, Mouse kidney and Mouse brain lysates stained with ARG42696 anti-ATP Citrate Lyase antibody [5I2] at 0.5 µg/ml dilution, overnight at 4°C.