abcam

Product datasheet

Anti-ATP citrate lyase antibody ab61762

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Overview

Product name	Anti-ATP citrate lyase antibody
Description	Rabbit polyclonal to ATP citrate lyase
Host species	Rabbit
Tested applications	**Suitable for:** IHC-P, ELISA, WB, ICC/IF
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic non-phosphopeptide derived from human ATP Citrate Lyase around the phosphorylation site of serine 454 (T-A-S^{P}-F-S).
Positive control	Extracts from COS7 cells, treated with Calyculin (50nM, 30mins).

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	Preservative: 0.02% Sodium Azide Constituents: 50% Glycerol, PBS, 150mM Sodium chloride, pH 7.4
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab61762** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		Use a concentration of 5 µg/ml. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
ELISA		1/5000.

Application	Abreviews	Notes
WB	★★★★☆	1/500 - 1/1000. Detects a band of approximately 122 kDa (predicted molecular weight: 122 kDa).
ICC/IF		Use a concentration of 1 - 5 µg/ml.

Target

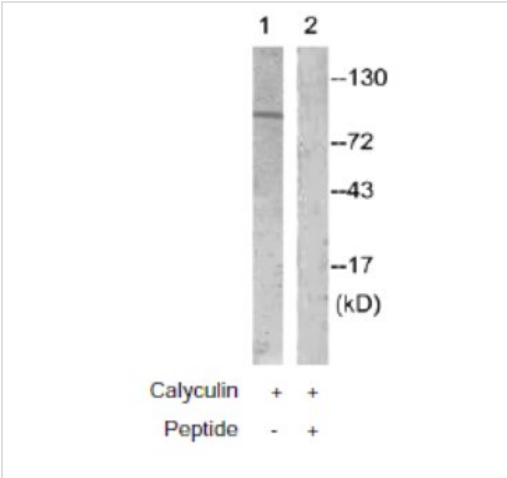
Function
ATP-citrate synthase is the primary enzyme responsible for the synthesis of cytosolic acetyl-CoA in many tissues. Has a central role in de novo lipid synthesis. In nervous tissue it may be involved in the biosynthesis of acetylcholine.

Sequence similarities
In the N-terminal section; belongs to the succinate/malate CoA ligase beta subunit family.
In the C-terminal section; belongs to the succinate/malate CoA ligase alpha subunit family.
Contains 1 ATP-grasp domain.

Post-translational modifications
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.

Cellular localization
Cytoplasm.

Images

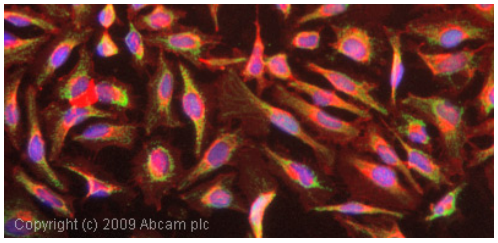


Western blot - ATP citrate lyase antibody (ab61762)

All lanes : Anti-ATP citrate lyase antibody (ab61762) at 1/500 dilution

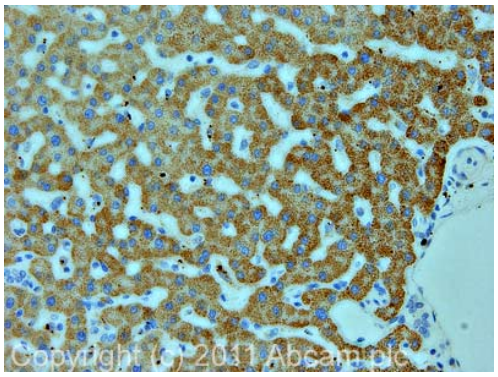
Lane 1 : Extracts from COS7 cells, treated with Calyculin (50nM, 30mins).
Lane 2 : Extracts from COS7 cells, treated with Calyculin (50nM, 30mins) and the immunising peptide.

Predicted band size: 122 kDa
Observed band size: 122 kDa



Immunocytochemistry/ Immunofluorescence - ATP citrate lyase antibody (ab61762)

ICC/IF image of ab61762 stained HeLa cells. The cells were 100% methanol fixed (5 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab61762, 1µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)-ATP citrate lyase antibody(ab61762)

IHC image of ab61762 staining in human normal liver formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with EDTA (pH9, epitope retrieval solution 2) for 20 mins. The section was then incubated with ab61762, 5µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

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