abcam

Product datasheet

Anti-Fatty Acid Synthase antibody ab22759

KO VALIDATED

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Overview

Product name	Anti-Fatty Acid Synthase antibody
Description	Rabbit polyclonal to Fatty Acid Synthase
Host species	Rabbit
Tested applications	**Suitable for:** ICC/IF, WB, IHC-P, IHC (PFA fixed), IHC-Fr, IP
Species reactivity	**Reacts with:** Mouse, Rat, Human **Predicted to work with:** Chicken, Cow
Immunogen	Synthetic peptide conjugated to KLH derived from within residues 2450 to the C-terminus of Mouse Fatty Acid Synthase. Read Abcam's proprietary immunogen policy (Peptide available as ab25719.)
Positive control	WB: 3T3-L1 nuclear lysate (ab14632), mouse brain (ab27253), mouse liver whole cell lysate (ab7935), A549, HAP1 and human liver lysates. ICC/IF: HEK293 cells.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.02% Sodium Azide Constituents: 1% BSA, PBS, pH 7.4
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab22759** 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
ICC/IF	★★★★★	Use a concentration of 1 µg/ml.
WB	★★★★★	Use at an assay dependent concentration. Detects a band of approximately 273 kDa (predicted molecular weight: 273 kDa).
IHC-P	★★★★☆	Use at an assay dependent concentration.
IHC (PFA fixed)		Use a concentration of 2 µg/ml.
IHC-Fr	★★★★★	Use at an assay dependent concentration.
IP	★★★★★	Use at an assay dependent concentration. PubMed: 21098489

Target

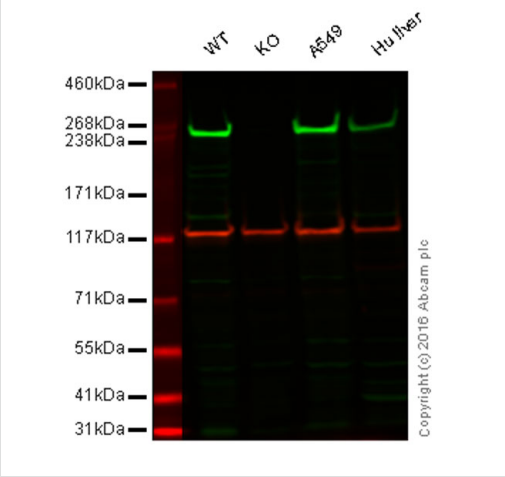
Function
Fatty acid synthetase catalyzes the formation of long-chain fatty acids from acetyl-CoA, malonyl-CoA and NADPH. This multifunctional protein has 7 catalytic activities and an acyl carrier protein.

Tissue specificity
Ubiquitous. Prominent expression in brain, lung, and liver.

Sequence similarities
Contains 1 acyl carrier domain.

Cellular localization
Cytoplasm. Melanosome. Identified by mass spectrometry in melanosome fractions from stage I to stage IV.

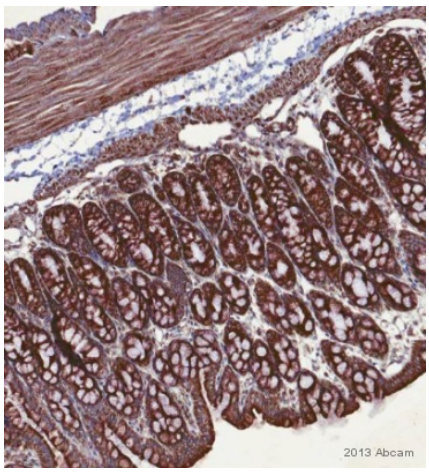
Images



Western blot - Anti-Fatty Acid Synthase antibody (ab22759)

Lane 1: Wild-type HAP1 cell lysate (20 µg)
Lane 2: Fatty Acid Synthase knockout HAP1 cell lysate (20 µg)
Lane 3: A549 cell lysate (20 µg)
Lane 4: Hu liver tissue lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab22759 observed at 250 kDa. Red - loading control, ab18058, observed at 124 kDa.

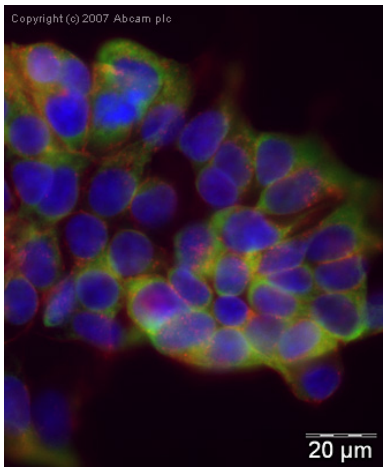
ab22759 was shown to specifically react with Fatty Acid Synthase in wild-type HAP1 cells. No band was observed when Fatty Acid Synthase knockout samples were examined. Wild-type and Fatty Acid Synthase knockout samples were subjected to SDS-PAGE. ab22759 and ab18058 (loading control to Vinculin) were diluted at 1 µg/ml and 1/10,000 respectively and incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1/10,000 dilution for 1 hour at room temperature before imaging.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Fatty Acid Synthase antibody (ab22759)

This image is courtesy of an anonymous Abreview

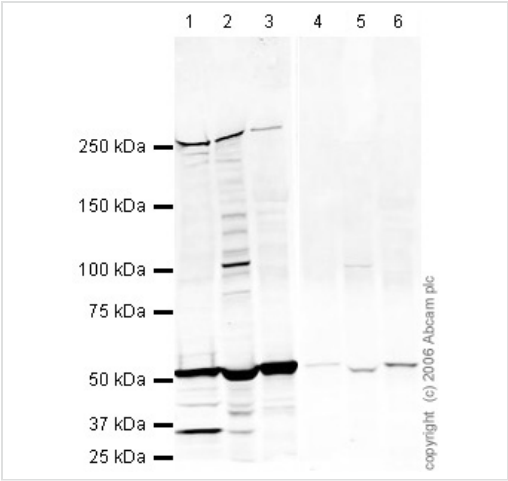
ab22759 staining Fatty Acid Synthase in Mouse colon tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 1.5% serum for 30 minutes at 23°C; antigen retrieval was by heat mediation in Citra Plus solution. Samples were incubated with primary antibody (2µg/ml) for 14 hours at 4°C. A Biotin-conjugated Goat anti-rabbit IgG polyclonal (1/50) was used as the secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-Fatty Acid Synthase antibody (ab22759)

ICC/IF image of ab22759 stained human HEK 293 cells. The cells were PFA fixed (10 min), permabilised in TBS-T (20 min) and incubated with the antibody (ab22759, 1µg/ml) for 1h at room temperature. 1%BSA / 10% normal goat serum / 0.3M glycine was used to quench autofluorescence and block non-specific protein-protein interactions.

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). DAPI was used to stain the cell nuclei (blue).



Western blot - Anti-Fatty Acid Synthase antibody (ab22759)

All lanes : Anti-Fatty Acid Synthase antibody (ab22759) at 1 µg/ml

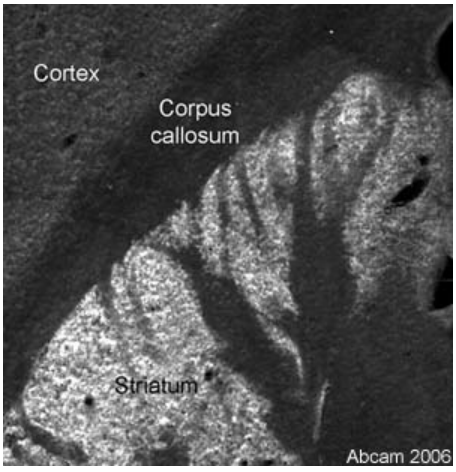
Lane 1 : 3T3-L1 nuclear extract lysate (ab14632)
Lane 2 : Brain (Mouse) Tissue Lysate (ab27253)
Lane 3 : Liver (Mouse) Tissue Lysate (ab7935)
Lane 4 : 3T3-L1 nuclear extract lysate (ab14632) with Mouse Fatty Acid Synthase peptide (ab25719) at 1 µg/ml
Lane 5 : Brain (Mouse) Tissue Lysate (ab27253) with Mouse Fatty Acid Synthase peptide (ab25719) at 1 µg/ml
Lane 6 : Liver (Mouse) Tissue Lysate (ab7935) with Mouse Fatty Acid Synthase peptide (ab25719) at 1 µg/ml

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Alexa Fluor Goat polyclonal to Rabbit IgG (700) at 1/10000 dilution

Performed under reducing conditions.

Predicted band size: 273 kDa
Observed band size: 273 kDa
Additional bands at: 100 kDa, 35 kDa, 50 kDa (possible IgG). We are unsure as to the identity of these extra bands.



Immunohistochemistry (PFA fixed) - Anti-Fatty Acid Synthase antibody (ab22759)

This image is courtesy of Sophie Pezet, King's College London, United Kingdom

Immunofluorescent staining for Fatty Acid Synthase in the rat striatum using Rabbit polyclonal to Fatty Acid Synthase (ab22759). Abundant staining was observed in the Striatum with lower levels of staining observed in the Corpus callosum. This is a montage of three pictures aquired using a X10 objective. ab22759 was used at 1/200 (2µg/ml) incubated overnight at room temperature.

Secondary antibody used was anti-rabbit Alexa Fluor® 488 at 1/1000 incubated for 2 hours at room temperature. Rat brain tissue was perfusion fixed with 4% PFA followed by overnight post-fixation in the same fixative, cryoprotected in 20% sucrose and frozen in OCT. 30µm coronal sections were cut on a cyrostat and immunohistochemistry performed by the 'free floating' technique.

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