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
Specificity	From Jan 2024, QC testing of replenishment batches of this polyclonal changed. All tested and expected application and reactive species combinations are still covered by our Abcam product promise. However, we no longer test all applications. For more information on a specific batch, please contact our Scientific Support who will be happy to help. You may also be interested in our alternative recombinant antibody, **ab128870**.
Tested applications	**Suitable for:** WB, IHC (PFA fixed), ICC
Species reactivity	**Reacts with:** Mouse, Rat, Human **Predicted to work with:** Chicken, Cow
Immunogen	Synthetic peptide corresponding to Mouse Fatty Acid Synthase aa 2450 to the C-terminus (C terminal) conjugated to keyhole limpet haemocyanin. (Peptide available as **ab25719**)
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

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	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS

	Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab22759 in the following tested applications.

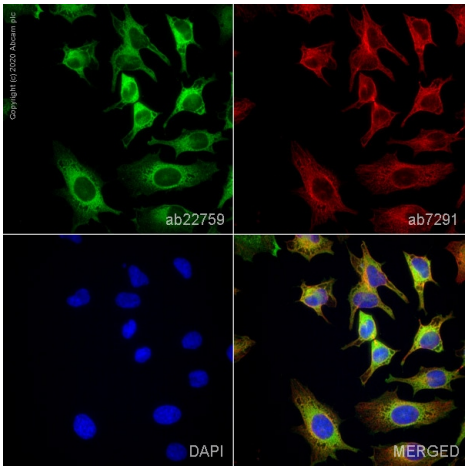
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★ (7)	Use at an assay dependent concentration. Detects a band of approximately 273 kDa (predicted molecular weight: 273 kDa).
IHC (PFA fixed)		Use a concentration of 2 µg/ml.
ICC		Use a concentration of 5 µg/ml.

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

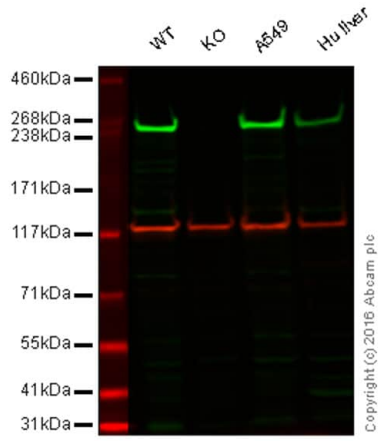


Immunocytochemistry - Anti-Fatty Acid Synthase antibody (ab22759)

ab22759 staining Fatty Acid Synthase in HeLa cells. The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.1% PBS-Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab22759 at 5 µg/ml and **ab7291**, Mouse monoclonal [DM1A] to alpha Tubulin - Loading Control. Cells were then incubated with **ab150081**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 488), pre-adsorbed at 1/1000 dilution (shown in green) and **ab150120**, Goat polyclonal Secondary Antibody to Mouse IgG - H&L (Alexa Fluor® 594), pre-adsorbed at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labelled with DAPI (shown in blue).

Also suitable in cells fixed with 100% methanol (5 min).

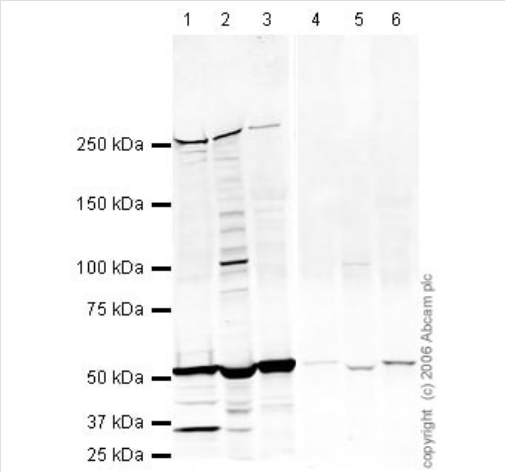
Image was acquired with a high-content analyser (Operetta CLS, Perkin Elmer) and a maximum intensity projection of confocal sections is shown.



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.



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

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

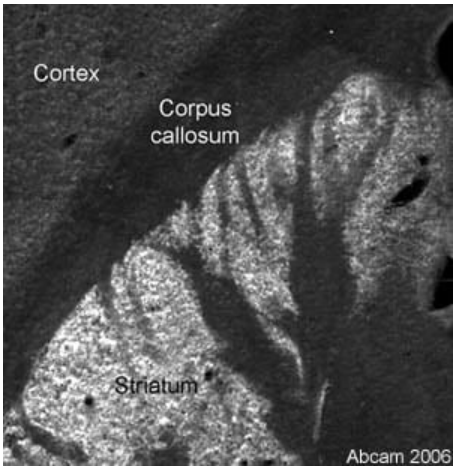
Lane 1 : 3T3-L1 nuclear extract lysate (**ab14632**)
Lane 2 : Brain (Mouse) Tissue Lysate (**ab27253**)
Lane 3 : Liver (Mouse) Tissue Lysate (**ab7935**)
Lane 4 : 3T3-L1 nuclear extract lysate (**ab14632**) with Mouse Fatty Acid Synthase peptide (**ab25719**) at 1 µg/ml
Lane 5 : Brain (Mouse) Tissue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