abcam

ab128870

Anti-Fatty Acid Synthase antibody [EPR7466]

Anti-Fatty Acid Synthase antibody [EPR7466] (ab128870) is a rabbit monoclonal antibody detecting Fatty Acid Synthase in **Western Blot, Flow Cytometry (Intra), IP, IHC-P, ICC/IF**. Suitable for **Human, Mouse, Rat**.

- KO validated for confirmed specificity
- Biophysical QC for unrivalled batch-batch consistency
- Over 50 publications

Recombinant | RabMAb | KO Validated | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR7466
Purification technique	Affinity purification Protein A
Dissociation constant	1.34 x 10^{-10} M
Concentration	0.554 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Rat
Dilution info	1/10000
Notes	This antibody does not work well in liver tissue in WB application. We suggest ab128856 as an alternative.

Species	Mouse
Dilution info	1/10000
Notes	This antibody does not work well in liver tissue in WB application. We suggest ab128856 as an alternative.

Species	Human
Dilution info	1/10000
Notes	This antibody does not work well in liver tissue in WB application. We suggest ab128856 as an alternative.

IHC-P

Tested

Species	Rat
Dilution info	1/450
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Species	Mouse
Dilution info	1/450
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Species	Human
Dilution info	1/450
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Expected

Species	Rat, Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/250 - 1/500
Notes	-

Expected

Species	Rat, Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50 - 1/69250
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

Species	Rat, Mouse

Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information FASN

Function	Fatty acid synthetase is a multifunctional enzyme that catalyzes the de novo biosynthesis of long-chain saturated fatty acids starting from acetyl-CoA and malonyl-CoA in the presence of NADPH. This multifunctional protein contains 7 catalytic activities and a site for the binding of the prosthetic group 4'-phosphopantetheine of the acyl carrier protein ([ACP]) domain. (Microbial infection) Fatty acid synthetase activity is required for SARS coronavirus-2/SARS-CoV-2 replication.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What is this antibody validated in?
Anti-Fatty Acid Synthase antibody [EPR7466] (ab128870) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunoprecipitation (IP), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Human, Mouse, Rat samples.

What is the molecular weight of Fatty Acid Synthase?
Anti-Fatty Acid Synthase [EPR7466] (ab128870) specifically detects a band for Fatty Acid Synthase (UniProt: P49327) at a molecular weight of 273kDa.

Trusted by the scientific community
Anti-Fatty Acid Synthase [EPR7466] (ab128870) was first used in a scientific publication in 2012 and has been cited over 50 times in peer-reviewed journals.

Specificity confirmed
The specificity of Anti-Fatty Acid Synthase antibody [EPR7466] (ab128870) has been confirmed by Western blot testing in FASN Knockout HAP1 cells.

Other related products
We have a range of other formats of antibody clone [EPR7466] also available for your convenience: ab128870, HRP - ab196854, Carrier free - ab221934, APC - ab319329, PE - ab319466, Alexa Fluor® 647 - ab319690, Alexa Fluor® 594 - ab319822, Alexa Fluor® 555 - ab319963, Alexa Fluor® 750 - ab321016

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

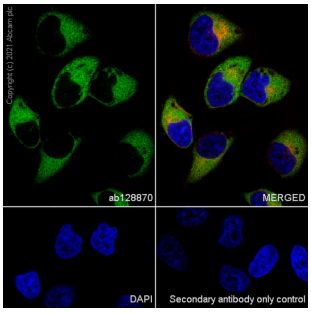
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

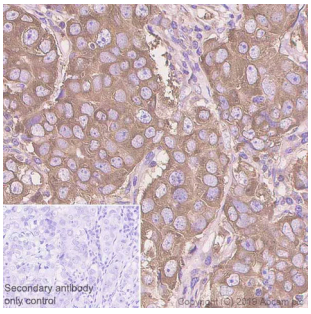
11 product images



Immunocytochemistry/ Immunofluorescence - Anti-Fatty Acid Synthase antibody [EPR7466] (ab128870)

Fatty Acid Synthase Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Fatty Acid Synthase antibody

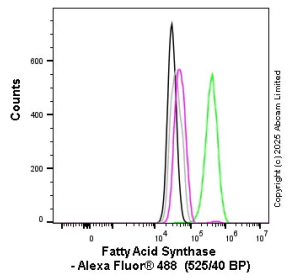
Immunocytochemistry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling Fatty Acid Synthase with Purified ab128870 at 1:50 dilution (10 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Fatty Acid Synthase antibody [EPR7466] (ab128870)

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

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human breast cancer tissue sections labeling Fatty Acid Synthase with Purified ab128870 at 1:450 dilution (1.09 µg/ml). Heat mediated antigen retrieval was performed using Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0) . Tissue was counterstained with Hematoxylin. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) secondary antibody was used. PBS instead of the primary antibody was used as the negative control.



Flow Cytometry (Intracellular) - Anti-Fatty Acid Synthase antibody [EPR7466] (ab128870)

Fatty Acid Synthase Flow Cytometry (Intracellular) staining using rabbit Anti-Fatty Acid Synthase antibody

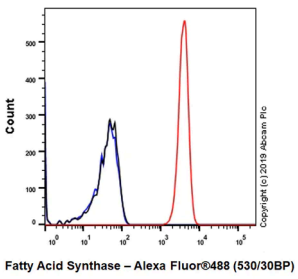
Flow cytometry overlay histogram showing wild-type HAP1 (green line) and FASN knockout HAP1 stained with ab128870 (magenta line). The cells were fixed with 80% methanol (5 min) and then permeabilised with 0.1% PBS-Triton X-100 for 15 min. The cells were then incubated in 1x PBS containing 10% normal goat serum to block non-specific protein-protein interaction followed by the antibody (ab128870) (1x 10^6 in 100µl at 0.008 µg/ml (1/69250 dilution)) for 30min at 22°C.

The secondary antibody Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed was incubated at 1/4000 dilution for 30min at 22°C.

Isotype control antibody was Recombinant Rabbit IgG, monoclonal [EPR25A] - Isotype Control in HAP1 WT cells (black line) and HAP1-FASN KO cells (grey line), used at the same concentration and conditions as the primary antibody.

Acquisition of >5000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter.

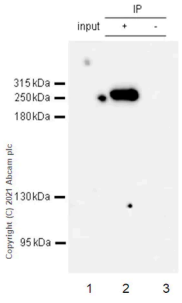
This antibody gave a positive signal in wild-type HAP1 fixed with 4% formaldehyde (10 min) and then permeabilised with 0.1% PBS-Triton X-100 for 15 min under the same conditions.



Flow Cytometry (Intracellular) - Anti-Fatty Acid Synthase antibody [EPR7466] (ab128870)

Fatty Acid Synthase Flow Cytometry (Intracellular) staining using rabbit Anti-Fatty Acid Synthase antibody

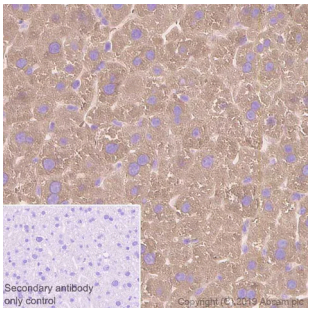
Flow Cytometry analysis of A549 (Human lung carcinoma epithelial cell) cells labelling Fatty Acid Synthase with Purified ab128870 at 1:50 dilution (10 µg/ml) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1:2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabelled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunoprecipitation - Anti-Fatty Acid Synthase antibody [EPR7466] (ab128870)

Purified ab128870 at 1:30 dilution (2µg) immunoprecipitating Fatty Acid Synthase in HEK-293 whole cell lysate.
Lane 1 (input): HEK-293 (Human embryonic kidney epithelial cell) whole cell lysate 10 µg
Lane 2 (+): ab128870 + HEK-293 whole cell lysate.
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab128870 in HEK-293 whole cell lysate.
VeriBlot for IP Detection Reagent (HRP)(ab131366) (1:10,000 dilution) was used for Western blotting.
Blocking Buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM/TBST.
Observed band size: kDa
All lanes:
Immunoprecipitation - Anti-Fatty Acid Synthase antibody [EPR7466] (ab128870)

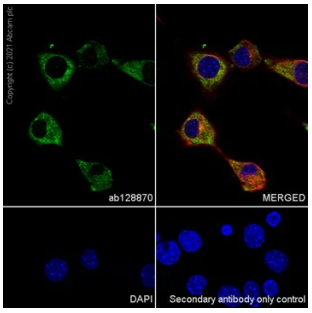
Predicted band size: 273 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Fatty Acid Synthase antibody [EPR7466] (ab128870)

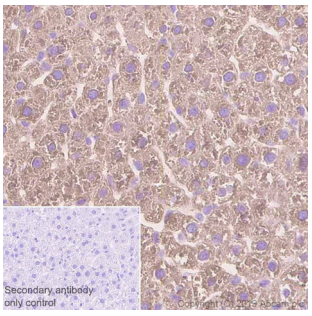
Fatty Acid Synthase Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Fatty Acid Synthase antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse liver tissue sections labeling Fatty Acid Synthase with Purified ab128870 at 1:450 dilution (1.09 µg/ml). Heat mediated antigen retrieval was performed using Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0) . Tissue was counterstained with Hematoxylin. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) secondary antibody was used. PBS instead of the primary antibody was used as the negative control.



Immunocytochemistry/ Immunofluorescence - Anti-Fatty Acid Synthase antibody [EPR7466] (ab128870)

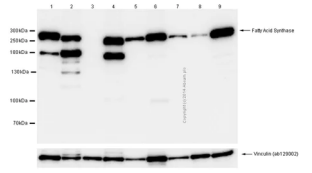
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized NIH/3T3 (mouse embryonic fibroblast) cells labelling with ab128870 at 1/50 dilution, followed by ab150081 antibody at 1/1000 dilution (Green). Confocal image showing cytoplasmic staining in NIH/3T3 cells is observed. ab195889 was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue).
Secondary antibody only control: Secondary antibody is ab150081 at 1/1000 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Fatty Acid Synthase antibody [EPR7466] (ab128870)

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

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat liver tissue sections labeling Fatty Acid Synthase with Purified ab128870 at 1:450 dilution (1.09 µg/ml). Heat mediated antigen retrieval was performed using Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0) . Tissue was counterstained with Hematoxylin. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) secondary antibody was used. PBS instead of the primary antibody was used as the negative control.



Western blot - Anti-Fatty Acid Synthase antibody [EPR7466] (ab128870)

Fatty Acid Synthase Western blot staining using rabbit Anti-Fatty Acid Synthase antibody

All lanes:
Western blot - Anti-Fatty Acid Synthase antibody [EPR7466] (ab128870) at 1/1000 dilution

Lane 1:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Lane 2:
A549 (Human lung carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 3:
Mouse liver lysate at 20 µg

Lane 4:
NIH/3T3 (Mouse embryonic fibroblast) whole cell lysate at 20 µg

Lane 5:
Mouse brain lysate at 20 µg

Lane 6:
L6 (Rat skeletal muscle myoblast) whole cell lysate at 20 µg

Lane 7:
Rat brain lysate at 20 µg

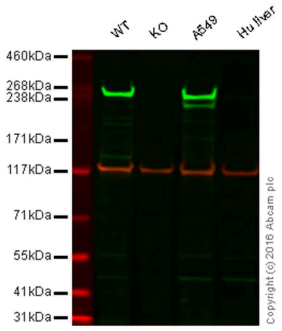
Lane 8:
Rat liver lysate at 20 µg

Lane 9:
HEK-293 (Human embryonic kidney epithelial cell) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 273 kDa



Western blot - Anti-Fatty Acid Synthase antibody [EPR7466] (ab128870)

Fatty Acid Synthase Western blot staining using rabbit Anti-Fatty Acid Synthase antibody

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 - ab128870 observed at 250 kDa. Red - loading control, ab18058, observed at 124 kDa.
ab128870 was shown to react with Fatty Acid Synthase in wild-type HAP1 cells along with additional cross reactive bands. 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. ab128870 and ab18058 (loading control to Vinculin) were both diluted at 1/10,000 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.

All lanes:
Western blot - Anti-Fatty Acid Synthase antibody [EPR7466] (ab128870)

Predicted band size: 273 kDa

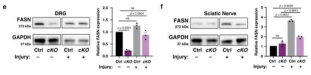


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Western blot - Anti-Fatty Acid Synthase antibody [EPR7466] (ab128870)

Fatty Acid Synthase western blot using anti-Fatty Acid Synthase antibody [EPR7466] ab128870. Publication image and figure legend from Avraham, O., Deng, P. Y., et al., 2020, Nat Commun, PubMed 32994417.

ab128870 was used in this publication in western blot. This may not be the same as the application(s) guaranteed by Abcam. For a full list of applications guaranteed by Abcam for ab128870 please see the product overview.

SGC upregulate genes involved in lipid metabolism in response to nerve injury.a Pathway analysis (KEGG 2016) of differentially upregulated genes in the SGC cluster. n = 2 biologically independent experiments. (FDR < 0.05, Log2Fold change >2). b t-SNE overlay for expression of Fasn gene. c DRG sections from control and FasncKO mice, immunostained for FASN (green) and the neuronal marker TUJ1 (magenta). Scale bar: 50 µm. d Nerve sections from control and FasncKO mice, immunostained for FASN (green) and the neuronal marker TUJ1 (magenta). Scale bar: 50 µm. e Western blot analysis and quantification of FASN protein expression in DRG from control and FasncKO mice with and without injury. Quantification of FASN expression normalized to GAPDH expression. ns-non significant. Source data are provided as a Source Data file. f Western blot analysis and quantification of FASN protein expression in Sciatic nerve from control and FasncKO mice with and without injury. Quantification of FASN expression normalized to GAPDH expression. ns-non significant. Source data are provided as a Source Data file. n = 3 biologically independent

animals in (e, f). Data are presented as mean values ± SEM in (e, f). One way ANOVA followed by Dunnett’ s multiple comparisons test in (e, f).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.