


### Anti-FADS2 antibody ab72189

[4 References](#) [2 Images](#)

#### Overview

<b>Product name</b>	Anti-FADS2 antibody
<b>Description</b>	Rabbit polyclonal to FADS2
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, IP
<b>Species reactivity</b>	<b>Reacts with:</b> Human <b>Predicted to work with:</b> Monkey, Baboon, Orangutan 
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	This antibody gave a positive signal in the following lysates: Human liver tissue lysate; Human brain tissue lysates; HeLa whole cell lysate; Hep G2 whole cell lysate.
<b>General notes</b>	<p>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.</p> <p>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&amp;As</p>

#### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	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.
<b>Storage buffer</b>	<p>pH: 7.40</p> <p>Preservative: 0.02% Sodium azide</p> <p>Constituent: PBS</p> <p>Batches of this product that have a concentration &lt; 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.</p>
<b>Purity</b>	Immunogen affinity purified
<b>Clonality</b>	Polyclonal

Isotype

IgG

## Applications

### The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab72189 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		Use a concentration of 1 µg/ml. Detects a band of approximately 45 kDa (predicted molecular weight: 52 kDa).
IP		Use at an assay dependent concentration.

## Target

### Function

Component of a lipid metabolic pathway that catalyzes biosynthesis of highly unsaturated fatty acids (HUFA) from precursor essential polyunsaturated fatty acids (PUFA) linoleic acid (LA) (18:2n-6) and alpha-linolenic acid (ALA) (18:3n-3). Catalyzes the first and rate limiting step in this pathway which is the desaturation of LA (18:2n-6) and ALA (18:3n-3) into gamma-linoleic acid (GLA) (18:3n-6) and stearidonic acid (18:4n-3) respectively and other desaturation steps. Highly unsaturated fatty acids (HUFA) play pivotal roles in many biological functions. It catalyzes as well the introduction of a cis double bond in palmitate to produce the mono-unsaturated fatty acid sapienate, the most abundant fatty acid in sebum.

### Tissue specificity

Expressed in a wide array of tissues, highest expression is found in liver followed by brain, lung, heart, and retina. A lower level is found in breast tumor when compared with normal tissues; lowest levels were found in patients with poor prognostic index.

### Pathway

Lipid metabolism; polyunsaturated fatty acid biosynthesis.

### Sequence similarities

Belongs to the fatty acid desaturase family.  
Contains 1 cytochrome b5 heme-binding domain.

### Developmental stage

Found in fetal heart.

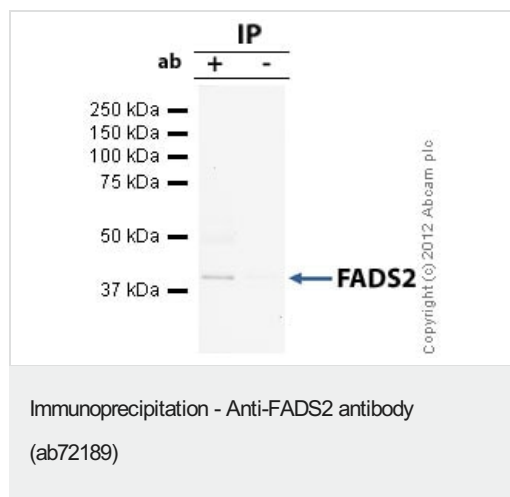
### Domain

The histidine box domains may contain the active site and/or be involved in metal ion binding.

### Cellular localization

Endoplasmic reticulum membrane.

## Images

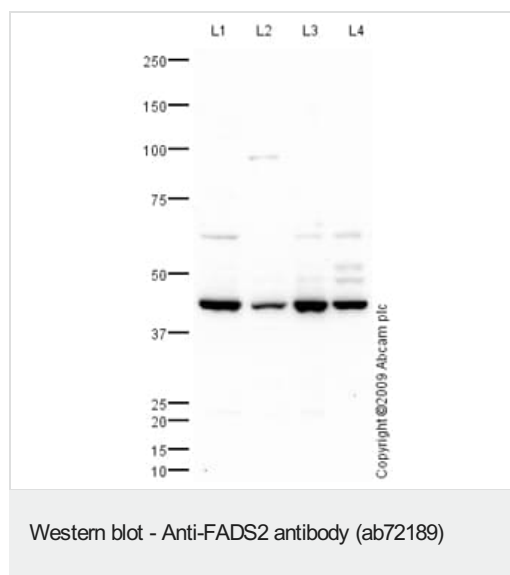


FADS2 was immunoprecipitated using 0.5mg HepG2 whole cell extract, 5µg of Rabbit polyclonal to FADS2 and 50µl of protein G magnetic beads (+). No antibody was added to the control (-). The antibody was incubated under agitation with Protein G beads for 10min, HepG2 whole cell extract lysate diluted in RIPA buffer was added to each sample and incubated for a further 10min under agitation.

Proteins were eluted by addition of 40µl SDS loading buffer and incubated for 10min at 70°C; 10µl of each sample was separated on a SDS PAGE gel, transferred to a nitrocellulose membrane, blocked with 5% BSA and probed with ab72189.

Secondary: Mouse monoclonal [SB62a] Secondary Antibody to Rabbit IgG light chain (HRP) ([ab99697](#)).

Band: 45kDa:FADS2.



**All lanes :** Anti-FADS2 antibody (ab72189) at 1 µg/ml

**Lane 1 :** HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate

**Lane 2 :** Human liver tissue lysate - total protein ([ab29889](#))

**Lane 3 :** HepG2 (Human hepatocellular liver carcinoma cell line) Whole Cell Lysate

**Lane 4 :** Human brain tissue lysate - total protein ([ab29466](#))

Lysates/proteins at 10 µg per lane.

### Secondary

**All lanes :** Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 52 kDa

**Observed band size:** 45 kDa

**Additional bands at:** 62.5 kDa. We are unsure as to the identity of these extra bands.

**Exposure time:** 2 minutes

ab72189 detects a strong band at 45 kDa in human liver and brain

tissue lysates, as well as HeLa and HepG2 whole cell lysates. This antibody was raised against an immunogen that is predicted to cross react with all known isoforms of Fatty acid desaturase 2 (FADS2). FADS2 has three isoforms, isoform one has a molecular weight of 52 kDa with isoforms two and three a molecular weight of 49 and 45 respectively (SwissProt data). The band we have observed is thought to represent isoform 3 of FADS2 (45 kDa).

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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