


Product datasheet

Anti-FADS2 antibody ab72189

1 References 2 Images

Overview

Product name	Anti-FADS2 antibody
Description	Rabbit polyclonal to FADS2
Host species	Rabbit
Tested applications	Suitable for: WB, IP
Species reactivity	Reacts with: Human Predicted to work with: Monkey, Baboon, Orangutan 
Immunogen	Synthetic peptide conjugated to KLH derived from within residues 1 - 100 of Human FADS2. Read Abcam's proprietary immunogen policy (Peptide available as ab90992 .)
Positive control	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.

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

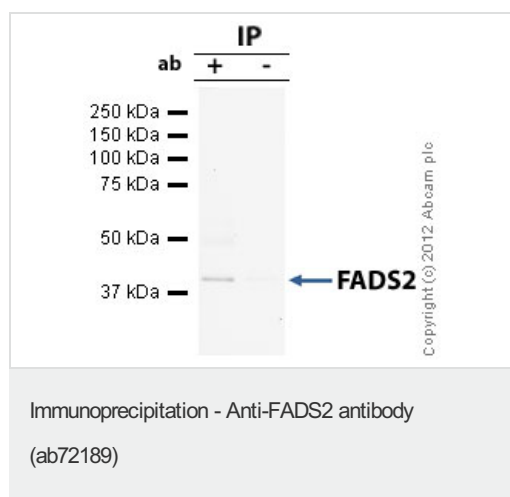
Our [Abpromise guarantee](#) covers the use of **ab72189** in the following tested applications.

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).

Application	Abreviews	Notes
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



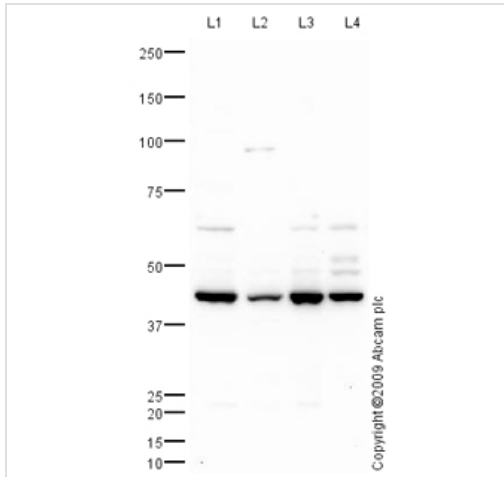
FADS2 was immunoprecipitated using 0.5mg HepG2 whole cell extract, 5µg of Rabbit polyclonal to FADS2 and 50µl of protein G magnetic beads (+). No antibody was added to the control (-).

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.



Western blot - Anti-FADS2 antibody (ab72189)

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

[why is the actual band size different from the predicted?](#)

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).

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