Product datasheet

Anti-FADS2 antibody ab72189

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 corresponding to Human FADS2 aa 1-100 (N terminal) conjugated to keyhole limpet haemocyanin.
(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: 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

Our Abpromise guarantee covers the use of ab72189 in the following tested applications.
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.

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 (-).

CD

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

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<th>Application</th>
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<th>Notes</th>
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<td>WB</td>
<td></td>
<td>Use a concentration of 1 µg/ml. Detects a band of approximately 45 kDa (predicted molecular weight: 52 kDa).</td>
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<tr>
<td>IP</td>
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<td>Use at an assay dependent concentration.</td>
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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

*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).

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

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