ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Fatty Acid Desaturase 1 (FADS1) Antibodies

Cat # FADS11-P	Human FADS1 Control/Blocking Peptide # 1	**SIZE**: 100 µg
Cat # FADS11-A	Rabbit anti-human FADS1 IgG (affinity pure) # 1	**SIZE**: 100 µg

Fatty acid desaturases (FADS) are enzymes that convert a single bond between two carbon atoms (C–C) to a double bond (C=C) in a fatty acyl chain. The resultant double bond is often referred to as an unsaturated bond, and the reactions catalyzed by these enzymes are known as desaturation reactions. These reactions require molecular oxygen and occur under aerobic conditions. The distribution of fatty acid desaturases is almost universal. The enzyme has been found in all organisms examined, with the exception of some bacteria such as *Escherichia coli*.

There are three types of fatty acid desaturase: FADS1, FADS2 and FADS3. **FADS1** encodes a deduced 444-amino acid protein that shares a high degree of homology with FADS2 and FADS3. **FADS1:** Mouse: 447 aa; Rat: 447 aa; Human: 444 aa; 51kDa; 11q12.2-q13.1. Highly expressed in Thyroid, cervix and eye.

Source of Antigen and Antibodies

Antigen	18-aa peptide of Human FADS1 (Protein accession # Q96I39 ; ref. 1); designated as FADS11-P control/blocking peptide conjugated to KLH
Epitope Location	~N-terminus
Antibody host/type	Rabbit, Polyclonal IgG # 1 (Cat # FADS11-A), purified over antigen-Agarose
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
Negative Control Ab	Non-immune rabbit IgG (Cat # 20009-1) to be used as –ve control for ELISA, WB, IHC etc.

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG

100 ug/100ul solution lyophilized powder
Supplied in **Buffer**: PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide

100 ug/100 ul solution lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials for less than a week at 4°C.

Long-term: at –20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20°C or below.

Shipping: 4°C for solutions and room temp for powder.

Recommended Usage

Western Blotting: 1-10 µg/ml; using affinity pure antibody (chemiluminescence technique).

ELISA: 1:100K; using 50-100 ng control peptide/well.

Histochemistry & Immunofluorescence: Not tested; we recommend the use of affinity purified antibody at 2-10 µg/ml.

Specificity & Cross-reactivity

Human FADS11-P peptide sequence has no significant homology to mouse and rat FADS1 or to human FADS2 and FADS3. We recommend using FADS12-A for detecting mouse FADS1. Antibody cross-reactivity in various species is not known. The control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol at: www.4adi.com\data\abblock.html).

General References:

1. Strausberg RL, et al., (2002). Proc Natl Acad Sci USA. 99:16899-16903.

List of related items, data sheets, and publications, using ADI antibodies is posted on the web site

*This product is for in vitro research use only.

Related material available from ADI

Antibodies to mouse and human FADS and FASNs.

FADS11-A 70306J

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