ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Fatty Acid Desaturase 3 (FADS2) Antibodies

Cat # FADS32-P	Human FADS3 Control/Blocking Peptide	**SIZE**: 100 µg
Cat # FADS32-A	Rabbit anti-human FADS3 IgG (affinity pure)	**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. **FADS3** encodes a deduced 445-amino acid protein that shares 52% and 62% sequence identity with FADS1 and FADS2, respectively. **FADS3:** Mouse: 445 aa; Rat: 447 aa; Human: 445 aa; 51kDa; 11q12-q13.1. Expression: Heart, liver, lung, uterus and brainstem.

Source of Antigen and Antibodies

Antigen	20-aa peptide of Human FADS3 (Protein accession # (Q9Y5Q0); ref. 1); designated as FADS31-P control/blocking peptide conjugated to KLH; epitope location ~ C-terminus
Antibody host/type	Rabbit, Polyclonal IgG (Cat # FADS32-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 and Storage of Antibodies and Peptides

Affinity pure IgG

100 ug/100ul solution	50 ug/50 ul lyophilized powder

Supplied in Buffer: PBS+0.1% BSA+0.05% azide
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide

100 ug/100 ul solution	50 ug/50 ul lyophilized powder

Supplied in Buffer: PBS pH 7.5, 0.05% sodium azide
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 FADS32-P peptide sequence is 79% conserved in mouse and rat without having significant homology to human FADS1 or FADS2. 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 the web site).

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.

FADS32-A-P 70306J

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