ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

# Fatty Acid Desaturase 2 (FADS2) Antibodies

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| **Cat** # FADS22-P | Mouse FADS2 Control/Blocking Peptide | **SIZE**: 100 µg |
| **Cat** # FADS22-A | Rabbit anti-mouse FADS2 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. **FADS2** encodes a deduced 444-amino acid protein that shares a high degree of homology with FADS2 and FADS3. **FADS2:** 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

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| **Antigen** | 17-aa peptide of Mouse FADS2 (Protein accession # Q9Z0R9; ref. 1); designated as FADS22-P control/blocking peptide conjugated to KLH; epitope location ~ N-terminus |
| **Antibody host/type** | Rabbit, Polyclonal IgG (Cat # FADS22-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

Mouse FADS22-P control peptide sequence has no significant homology to human or rat FADS2 or to human FADS1 and FADS3. 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.

FADS22S-A-P 71206A


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