ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

## Adiponectin Receptor 2 (ADIPOR2) Antibodies

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| Cat. # ADIPOR22-A | Rabbit Anti-Mouse ADIPOR2 IgG # 2 (aff pure) | **SIZE**: 100 ug |
| Cat. # ADIPOR22-P | Mouse ADIPOR2 Control/blocking Peptide #2 | **SIZE**: 100 ug |

**Acrp30** (adipocyte complement-related protein of 30 kDa), also known as AdipoQ, APM1, Adiponectin, Gelatin binding protein 28 kDa/GBP28 or adipocyte most abundant gene transcript) was identified as a novel adipocyte-specific synthesized and secreted protein with structural resemblance to complement factor C1q. Like adipsin, Acrp30 secretion is induced ~10-fold during adipocyte differentiation. Plasma levels are reduced in obese humans, and low levels are associated with insulin-resistance. Treatment of db/db mice with TZD increased Acrp30 levels. Acrp30 is proteolytically cleaved at 104 aa to generate the **globular Acrp30 (gAcrp30).** Administration of gAcrp30 into mice fed a diet high in fat and sugar caused substantial weight loss. A marked reduction in plasma triglycerides, glucose, and free fatty acids was attributed due in part to increased fatty acid oxidation by muscle. Full length Acrp30 was less potent than gAcrp30.

Human Adiponectin receptor 2/ADIPOR2, (mouse, rat and human 386-aa, ~42-43 kda predicted mol wt). Human and ADIPOR2 proteins are 95.2% homologous. ADIPOR2 is alternatively spliced to an isoforms-2 (missing 284-386 aa etc). ADIPOR2 is highly expressed in liver. Expressed at intermediate level in heart, kidney, lung and skeletal muscle. it is Weakly expressed in brain, spleen and testis

### Source of Antigen and Antibodies

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| **Antigen** | 14-aa peptide from Mouse **ADIPOR2 (protein accession # Q8BQS5, refs 1), designated ADIPOR22-P** or Control Peptide/blocking peptide) conjugated to KLH |
| **Location** | ~C-terminus, Extracellular domain |
| **Ab Host/type** | Rabbit, Polyclonal, Aff pure IgG (**cat # ADIPOR22-A**) purified over antigen-agarose column |
| **2-ab** | **Goat Anti-rabbit IgG-HRP** cat # 20320 (AP, biotin, FITC conjugates also available) |
| **-ve control** | # 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control |

### 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 at -20OC and powder at 4oC or -20oC..

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

**Stability**: 6-12 months at –20oC or below.
**Shipping**: 4oC for solutions and room temp for powder.

### Recommended Usage

**Western Blotting** (1-10 ug/ml for affinity pure antibody using ECL technique).

**ELISA**: Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (0.5-1 ug/ml for affinity pure).

**Histochemistry** & Immunofluorescence: Not tested. We recommend the use of aff pure IgG at 2-20 ug/ml.
(see published refs using this antibody at the web site).

### Cross-reactivity

Mouse ADIPOR22-P antigenic peptide is 100% conserved in rat and 92% with bovine, chimp. and human, 85% in pig ADIPOR2. No significant sequence homology is seen with ADIPOR1. Antibody crossreactivity in various other species is not established. 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:** Yamauchi, T et al (2003) Nature 423, 762-769; NCBI Annotation Project (Feb 2003) Direct submission, NCBI, NIH, Bethesda, MD-20894.

**(2) Citations of ADI's Antibodies for ADIPOR2** (see web site for updateds)

Fujioka D, 2006, Am J Physiol Heart Circ Physiol, 290: H2409 - H2416 WB IHC
Ding X, 2005, Am. J. Pathol., 166: 1655 – 1669, WB
Mistry T 2006, BBRC 348, 832-838, IF
Rovin BH, 2006, Clin. Immunol. 120, 99-105 WB
Takemura Y, 2006, Endocrinology, 318, 117-123 WB

*This product is for In vitro research use only.

**Related material available from ADI**

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| ADIPOR22-A-P | 70808A |

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