ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Agouti Protein Antibodies

Cat # AGO11-S	Rabbit Anti-Mouse Agouti, antisera	**SIZE**: 100 ul
Cat # AGO11-A	Rabbit Anti- Mouse Agouti IgG (Affinity Pure)	**SIZE**: 100 ug
Cat # AGO11-P	Mouse Agouti control/blocking peptide	**SIZE**: 100 ug

Several common diseases such as type II diabetes, hypertension, cardiovascular diseases, hyperlipidemia, and some cancers are associated with obesity. An abnormal increase in body fat relative to lean tissue mass has been used as an indicator of obesity. High fat diet, certain environmental factors, and genetic linkage are the primary causes of obesity. In order to understand the genetic basis of obesity, several monogenic murine obesity models have been characterized *including obese (Ob), diabetes (db), fat (fat), agouti yellow (A^y), and tubby (tub).* More recently, *Tub*, the human homolog of mouse *Tub*, *TULP1 & TULP2* (for Tubby Like Proteins) and Agouti related protein (AGRP) have been cloned. The obesity associated with *Ay* mice may be due to ectopic expression of a secreted protein Agouti. *Agouti* protein (132 aa in human) is normally expressed in skin but its ubiquitous expression causes obesity. Agouti is a paracrine-signaling molecule that affects pigmentation by inhibiting the melanocortin receptor 1 (MCR-1). However, recombinant Agouti protein also antagonizes the MC2R and MC4R. AGRP (132 aa in human, chromosome 16q21) is normally expressed in adrenal and hypothalamus. AGRP levels are increased several folds in *ob/ob* mice. AGRP is a strong antagonist of MC3R and MC4R. Ubiquitous expression of AGRP in transgenic mice causes obesity without altering skin pigmentation.

Source of Antigen and Antibodies

Antigen	21aa peptide of **Mouse Agouti** (1); **Designated (AGO11-P** or **control peptide /blocking peptide**) conjugated to KLH; Epitope location ~ N-terminus
Ab Host/type	Rabbit, Polyclonal unpurified antiserum (#**AGO11**-S) and IgG, purified over antigen-agarose (Cat # **AGO11**-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (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

Antiserum (unpurified)
100ul solution lyophilized powder
Supplied in Buffer: 0.05% azide
Reconstitute powder in 100 ul PBS

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 20°C and powder at 4°C or -20°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 (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure using Chemiluminescence technique).

ELISA (1:10K-1:100K; using 50-100 ng of control peptide/well).

Histochemistry & Immunofluorescence: not tested. We recommend the use of affinity pure antibody at 2-20 ug/ml.

Specificity & Cross-reactivity

Mouse AGO11-P peptide is 80% conserved in human, 73% in pig, 75% in fox. 6-% in bovine agouti proteins. No homology is seen with AGRP, tubby, tub, TULP1, and TULP2. Antibody crossreactivity 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. Miller MW et al (1993) Genes Develop. 7, 454; Bultman SJ et al (1992) Cell 71, 1195; Kwon HY et al (1994) PNAS 91, 9760; Wilson BD et al (1995) Human Mol Genet. 4, 223;

**This product is for In vitro research use only.*

Related material available from ADI

Anti-Agouti, AGRP, Tubby, TUB, TULP1, TULP2, Leptin, and Melanocortin receptors 91-5)

Anti-Rabbit IgG-HRP Conjugate and ECL Reagents

Western Blot Recycling Kit (Strips blots in 5 minutes) and re-use the same blot with multiple antibodies

AGO11-S-A-P 71129S

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