

Product Specification Sheet

**Mahogany/Attractin Antibodies**

Cat. # MAHG11-P	Mouse/Human Mahogany Control Peptide	<b>SIZE:</b> 100 ug
Cat. # MAHG11-S	Rabbit Anti-Mouse/Human Mahogany antiserum	<b>SIZE:</b> 100 ul
Cat. # MAHG11-A	Rabbit Anti-Mouse/Human Mahogany, IgG (aff Pure)	<b>SIZE:</b> 100 ug

Several common diseases such as type II diabetes, hypertension, cardiovascular diseases, hyperlipidemia, and some cancers are associated with 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<sup>y</sup>)*, 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, such as in rare allele *lethal yellow*, causes yellow coat., linear growth, immune defects and obesity. Agouti is a paracrine-signaling molecule that affects pigmentation by inhibiting the melanocortin receptor 1 (MCR-1 and possibly MC2R and MC4R).

The **Mahogany (mg)** mutations suppress the effect of lethal yellow including obesity. The **Mahogany** locus does not suppress the obese phenotype of the MC4R null allele or those of monogenic obese models (*Lep<sup>ob</sup>*, *tub*, and *Cpe<sup>fat</sup>*). However, mahogany can suppress diet-induced obesity. **Mahogany (mg)** gene, *Mgca*, encodes a 1428 aa single transmembrane protein that is expressed in many tissues including pigment cells and hypothalamus. The extracellular domain of the *Mgca* protein is the orthologue of human attractin, a circulating molecule produced by activated T-cells implicated in immune cell interaction. The short cytoplasmic tail contains a site that is conserved between *C. elegans* and mammals.

**Source of Antigen and Antibodies**

<b>Antigen</b>	21-aa peptide from <b>Mouse Mahogany (1); Designation (#MAHG11-P, control/blocking peptide)</b> conjugated to KLH; epitope location ~ C-terminus
<b>Ab Host/type</b>	Rabbit, Polyclonal unpurified antiserum ( <b>#MAHG11-S</b> ) and IgG, purified over antigen-agarose (Cat # <b>MAHG11-A</b> )
<b>2-Ab</b>	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
<b>-ve control IgG</b>	# 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 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 -200C 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** (1:1K-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**

The 21 AA mouse MHAG11-P control peptide 100% conserved in human, rat, bovine, and g. pig. No significant sequence homology is detected with other proteins. Antibody cross-reactivity in various species has not been studied. 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:**

- Gunn TM et al (1999) Nature 398, 152; Nagle DL et al (1999) Nature 398, 148; Ohara O et al (1998) DNA res. 5, 31

\*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 (1-5)

MAHG11-S-A-P 71219A