ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Mahogany/Attractin Antibodies

Cat. # MAHG11-P	Mouse/Human Mahogany Control Peptide	**SIZE**: 100 ug
Cat. # MAHG11-S	Rabbit Anti-Mouse/Human Mahogany antiserum	**SIZE**: 100 ul
Cat. # MAHG11-A	Rabbit Anti-Mouse/Human Mahogany, IgG (aff Pure)	**SIZE**: 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^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, 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^{db}, tub, and Cpe^{fat}). 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

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

1. 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

Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, San Antonio, TX 78244, USA; **Email**: service@4adi.com

India Contact:
Life Technologies (India) Pvt. Ltd.
306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444
Email: customerservice@lifetechindia.com Website: www.lifetechindia.com