

Product Specification Sheet

Tubby Protein Antibodies

Cat. # TUBBY12-P	Mouse Tubby Control Peptide # 2	SIZE: 100 ug
Cat. # TUBBY12-S	Rabbit Anti-Mouse Tubby antiserum # 2	SIZE: 100 ul
Cat. # TUBBY12-A	Rabbit Anti-Mouse Tubby IgG # 2 (Aff Pure)	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	19aa peptide of Mouse Tubby (1); Designated (TUBBY12-P or control peptide) epitope location ~ N-terminus
Ab Host/type	Rabbit, polyclonal Unpurified antiserum (cat #TUBBY12-S) Aff pure IgG (cat # TUBBY12-A purified over antigen-agarose column
2-ab	Goat Anti-rabbit IgG-HRP cat # 20320 (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 mouse TUBBY12-P peptide 95% (18/19 aa) homologous with human tubby and human tub homolog (1-2). Therefore, anti-TUBB12 is likely to crossreact with mouse and human Tubby and human TUB (506 aa) (1). No homology is seen with Agouti, AGRP, 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. Kleyn PW et al (1996) Cell 85, 281-290

*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); Mahogany, UCP1-3, Orexin and Orexin receptors 1/2

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

TUBBY12-S-A-P 71219A