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#2789

## Adiponectin (C45B10) Rabbit mAb

**For Research Use Only. Not for Use in Diagnostic Procedures.**

<b>Applications:</b> W	<b>Reactivity:</b> H M R	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 27	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #Q15848	<b>Entrez-Gene Id:</b> 9370
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### Product Usage Information

#### Application

Western Blotting

#### Dilution

1:1000

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

### Specificity/Sensitivity

Adiponectin (C45B10) Rabbit mAb detects endogenous levels of total adiponectin protein monomer. It will not detect higher molecular weight forms of adiponectin.

### Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human adiponectin protein.

### Background

Adiponectin, also termed AdipoQ, Acrp30, apM1 and GBP28, is an adipokine expressed exclusively in brown and white adipocytes (1). It is secreted into the blood and exists in three major forms: a low molecular weight trimer, a medium molecular weight hexamer and a high molecular weight multimer (1). Adiponectin levels are decreased in obese and insulin-resistant mice and humans (2), suggesting that this adipokine is critical to maintain insulin sensitivity. Adiponectin stimulates the phosphorylation of AMPK $\alpha$  at Thr172 and activates AMPK in skeletal muscle (3). It also stimulates glucose uptake in myocytes (3). The block of AMPK activation by a dominant-negative AMPK $\alpha$ 2 isoform inhibits the effect of adiponectin on glucose uptake, indicating that adiponectin stimulates glucose uptake and increases insulin sensitivity through its action on AMPK (3). Adiponectin mutants that are not able to form oligomers larger than trimers have no effect on the AMPK pathway (4). Mutations that render adiponectin unable to form high molecular weight multimers are associated with human diabetes (4), indicating the importance of multimerization for adiponectin activity.

### Background References

1. Kadowaki, T. et al. (2006) *J. Clin. Invest.* 116, 1784-1792.
2. Hu, E. et al. (1996) *J. Biol. Chem.* 271, 10697-10703.
3. Yamauchi, T. et al. (2002) *Nat. Med.* 8, 1288-1295.
4. Waki, H. et al. (2003) *J. Biol. Chem.* 278, 40352-40363.

### Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

### Western Blot Buffer

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

### Applications Key

**W:** Western Blotting

### Cross-Reactivity Key

**H:** Human **M:** Mouse **R:** Rat

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