

#2789 Store at -20°C

# Adiponectin (C45B10) Rabbit mAb

✓ 100 µl (10 western blots)



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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #9370  
Swiss-Prot Acc. #Q15848

Applications W Endogenous	Species Cross-Reactivity* M, R, (H)	Molecular Wt. 27 kDa	Isotype Rabbit IgG**
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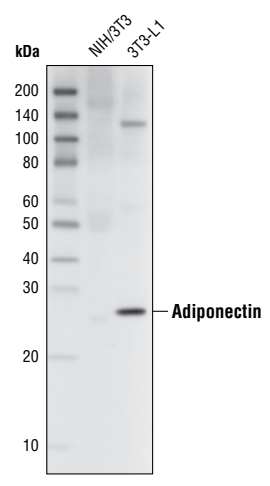
**Background:** Adiponectin, also termed AdipoQ, Acrp30, apM1 and GBP28, is an adipokine expressed exclusively in brown and white adipocytes (1). It is secreted into the blood and exists in three major forms: a low molecular weight trimer, a medium molecular weight hexamer and a high molecular weight 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.

**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 human adiponectin.

### 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.



Western blot analysis of extracts from NIH/3T3 and 3T3-L1 cells using Adiponectin (C45B10) Rabbit mAb.

**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.

\*Species cross-reactivity is determined by western blot.

\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

### Recommended Antibody Dilutions:

Western blotting 1:1000

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.

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

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**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide

**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine

Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.