Revision 1

# PGC-1α (3G6) Rabbit mAb

#2178 Store at -20C

Cell Signaling TECHNOLOGY®

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

| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|---|---|---|---|---|---|---|
| W | H | Transfected Only | 130 | Rabbit IgG | #Q9UBK2 | 10891 |

## Product Usage Information

| Application | Dilution |
|---|---|
| Western Blotting | 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

PGC-1α (3G6) Rabbit mAb detects transfected levels of total PGC-1α protein. This antibody does not cross-react with PGC-1β or other related proteins.

## Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant human PGC-1α fusion protein.

## Background

PPARγ coactivator-1α (PGC-1α) was originally identified as a transcriptional coactivator whose expression closely correlated with adaptive thermogenesis following exposure to cold temperatures (1). Named for its association with the nuclear receptor peroxisome-proliferator activated receptor (PPARγ), PGC-1α interacts with a diverse array of transcription factors to regulate numerous aspects of cell physiology (2). PGC-1α helps to regulate cell processes important in adaptive thermogenesis and energy metabolism, including the related functions of glucose uptake, gluconeogenesis, insulin secretion, and mitochondrial biogenesis (3). Long thought to be a potential therapeutic target for the treatment of type II diabetes, obesity, cardiomyopathy, or other metabolic disorders (reviewed in 4), a recent functional survey found no obvious differences in PPARγ activity associated with recognized PGC-1α variants (5).

## Background References

1. Puigserver, P. et al. (1998) *Cell* 92, 829-839.
2. Liang, H. and Ward, W.F. (2006) *Adv. Physiol. Educ.* 30, 145-151.
3. Tiraby, C. and Langin, D. (2005) *Med. Sci. (Paris)* 21, 49-54.
4. Finck, B.N. and Kelly, D.P. (2006) *J. Clin. Invest.* 116, 615-622.
5. Nitz, I. et al. (2007) *Biochem. Biophys. Res. Commun.* 353, 481-486.

## 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

## Trademarks and Patents



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