

PASK (C70B2) Rabbit mAb

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R	Endogenous	170	Rabbit IgG	#Q96RG2	23178

Product Usage Information**Application**

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

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

PASK (C70B2) Rabbit mAb detects endogenous levels of total PASK protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the sequence of mouse PASK.

Background

PASK is a serine/threonine kinase that contains two PAS (Per-Arnt-Sim) domains (1). Its kinase activity is up-regulated by autophosphorylation of the activation loop within its catalytic domain and is inhibited *in cis* by one of the PAS domains (1). Studies found that the yeast homolog of PASK phosphorylates and inhibits two enzymes required for glycogen biosynthesis: UDP-glucose pyrophosphorylase and glycogen synthase, resulting in the decrease of carbohydrate storage (2). Further studies showed that increased glucose levels activate PASK activity and enhance its expression in pancreatic β-cells (3). PASK is essential for the glucose-stimulated expression of preproinsulin and Pdx1, suggesting its role in the regulation of genes involved in pancreatic β-cell functions (3). PASK was shown to be critical for glucose-stimulated insulin secretion in pancreatic β-cells (4). The absence of PASK also protects animals from obesity and insulin resistance when they are fed a high-fat diet (4). These findings suggest that PASK functions as an important metabolic sensor in various cells (4).

Background References

1. Rutter, J. et al. (2001) *Proc Natl Acad Sci USA* 98, 8991-6.
2. Rutter, J. et al. (2002) *Cell* 111, 17-28.
3. da Silva Xavier, G. et al. (2004) *Proc Natl Acad Sci USA* 101, 8319-24.
4. Hao, H.X. et al. (2007) *Proc Natl Acad Sci USA* 104, 15466-71.

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 **IP:** Immunoprecipitation

Cross-Reactivity Key

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

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