Revision 3

Store at -20C

#6919

SIK2 (D28G3) Rabbit mAb

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, IP	H M	Endogenous	130	Rabbit IgG	#Q9H0K1	23235

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	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

SIK2 (D28G3) Rabbit mAb recognizes endogenous levels of total SIK2 protein.

Species predicted to react based on 100% sequence homology

Rat

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro14 of human SIK2 protein.

Background

Salt-inducible kinase 1 (SIK1) was originally identified as a serine/threonine kinase from adrenocortical tissues of rats on a high salt diet (1). SIK1 is an SNF1/AMPK family kinase capable of autophosphorylation (1). SIK2 is an isoform of SIK1 and is specifically expressed in adipose tissues where it is induced during adipocyte differentiation (2). Studies suggest that SIK2 can phosphorylate human insulin receptor substrate 1 (IRS-1) at Ser794. Along with evidence that SIK2 expression and activity are increased in white adipocytes of diabetic mice, this finding suggests a possible role for SIK2 in regulating insulin signaling in adipocytes and in the development of insulin resistance (2,3). Insulin triggers Akt2-mediated phosphorylation of SIK2 at Ser358 and the resultant kinase activation during post-fasting feeding (4). The activated SIK2 then induces the phosphorylation of TORC2 at Ser171, resulting in translocation of this transcriptional coactivator from the nucleus to the cytoplasm, where it is degraded through the ubiquitin pathway, leading to inhibition of gluconeogenic gene expression (4).

Background References

1. Wang, Z. et al. (1999) *FEBS Lett* 453, 135-9.
2. Horike, N. et al. (2003) *J Biol Chem* 278, 18440-7.
3. Katoh, Y. et al. (2004) *Mol Cell Endocrinol* 217, 109-12.
4. Dentin, R. et al. (2007) *Nature* 449, 366-9.

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

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Limited Uses

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