Revision 5

#12448 Store at -20C

CK1ε Antibody

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H M R Mk	Endogenous	43	Rabbit	#P49674	1454

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 and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

CK1ε Antibody recognizes endogenous levels of total CK1ε protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala349 of human CK1ε protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Casein Kinase I (CK1 or CKI) is the name given to a family of kinases consisting of multiple isoforms (α, α', β, γ1-3, δ, and ε) with a conserved N-terminal kinase domain and a variable C-terminal sequence that determines subcellular localization and regulates enzyme activity (1-3). Indeed, multiple inhibitory autophosphorylation sites have been identified near the C terminus of CK1ε (3). This ubiquitously expressed family of protein kinases has been implicated in multiple processes, including DNA repair, cell morphology, and Wnt signaling (4). Perhaps the best understood role of CK1 is to provide the priming phosphorylation of β-catenin at Ser45 to produce the consensus GSK-3 substrate motif (S/T-X-X-X-pS) (4).

CK1ε is involved in many cellular processes, such as differentiation (5-7), cell growth and apoptosis (8), and control of the circadian rhythm (9,10).

Background References

1. Gross, S.D. and Anderson, R.A. (1998) *Cell Signal* 10, 699-711.
2. Vancura, A. et al. (1994) *J Biol Chem* 269, 19271-8.
3. Gietzen, K.F. and Virshup, D.M. (1999) *J Biol Chem* 274, 32063-70.
4. Polakis, P. (2002) *Curr Biol* 12, R499-R501.
5. Okamura, A. et al. (2004) *Blood* 103, 2997-3004.
6. Swiatek, W. et al. (2006) *J Biol Chem* 281, 12233-41.
7. Bischof, J. et al. (2011) *PLoS One* 6, e20857.
8. Brockschmidt, C. et al. (2008) *Gut* 57, 799-806.
9. Keesler, G.A. et al. (2000) *Neuroreport* 11, 951-5.
10. Meng, Q.J. et al. (2008) *Neuron* 58, 78-88.

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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