

#12417 Store at -20C

CK1δ Antibody

Cell Signaling
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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H M R Mk	Endogenous	44	Rabbit	#P48730	1453

Product Usage Information

Application

Western Blotting

Dilution

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

CK1δ Antibody recognizes endogenous levels of total CK1δ protein. This antibody does not cross-react with CK1ε.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human CK1δ 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).

CK1δ is involved in many cellular processes such as differentiation (5), cell growth and apoptosis (6-8), and control of the circadian rhythm (9).

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. Bryja, V. et al. (2007) *J Cell Sci* 120, 586-95.
6. Knippschild, U. et al. (2005) *Onkologie* 28, 508-14.
7. Knippschild, U. et al. (1997) *Oncogene* 15, 1727-36.
8. Brockschmidt, C. et al. (2008) *Gut* 57, 799-806.
9. Vanselow, K. and Kramer, A. (2007) *Cold Spring Harb Symp Quant Biol* 72, 167-76.

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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