Revision 1

#3256 Store at -20C

CLK3 Antibody

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IF-IC	H M R Mk	Endogenous	59, 17	Rabbit	#P49761	1198

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunofluorescence (Immunocytochemistry)	1:25

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

CLK3 Antibody detects endogenous levels of full-length and truncated forms of CLK3 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Tyr61 of human CLK3 (P49761-1). Antibodies were purified by protein A and peptide affinity chromatography.

Background

The cdc2-like kinase (CLK) family contains at least four highly conserved isoforms: CLK1, CLK2, CLK3 and CLK4 (1,2). CLKs are dual specificity kinases that autophosphorylate on serine, threonine and tyrosine residues and phosphorylate exogenous substrates on serine and threonine residues (2). CLK family members exist as both a full-length catalytically active form and an alternatively-spliced, inactive truncated form (1). A family of highly phosphorylated proteins, called serine and arginine rich (SR) proteins, are phosphorylated by CLKs (3-5). SR proteins are splicing factors that regulate the assembly of the spliceosome, a macromolecular complex where RNA splicing occurs in the nucleus. They are also involved in the selection of splice sites. Thus, CLKs may play important roles in regulating RNA splicing.
CLK3 is abundantly expressed in the testis and, similar to other family members, has been implicated in regulating RNA splicing (6-8).

Background References

1. Hanes, J. et al. (1994) *J. Mol. Biol.* 244, 665-672.
2. Nayler, O. et al. (1997) *Biochem. J.* 326, 693-700.
3. Colwill, K. et al. (1996) *EMBO J.* 15, 265-275.
4. Prasad, J. and Manley, J.L. (2003) *Mol. Cell Biol.* 23, 4139-4149.
5. Muraki, M. et al. (2004) *J. Biol. Chem.* 279, 24246-24254.
6. Menegay, H. et al. (1999) *Exp. Cell Res.* 253, 463-473.
7. Becker, W. et al. (1996) *Biochim. Biophys. Acta* 1312, 63-67.
8. Duncan, P.I. et al. (1998) *Exp. Cell Res.* 241, 300-308.

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

WB: Western Blotting **IF-IC:** Immunofluorescence (Immunocytochemistry)

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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