Revision 1

Store at -20C

#5524

PITSLRE/CDK11 (D88B3) 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:
WB, IP	H M Mk	Endogenous	110	Rabbit IgG	#P21127	984

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

PITSLRE/CDK11 (D88B3) Rabbit mAb recognizes endogenous levels of total PITSLRE/CDK11 protein. This antibody will detect the full-length (CDK11^{p110}) and is predicted to detect the alternate transcript (CDK11^{p58}) of PITSLRE/CDK11. The antibody is predicted to detect both PITSLREA/CDK11B and PITSLREB/CDK11A.

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 Met734 of human PITSLRE/CDK11 protein.

Background

PITSLRE, alternatively known as cell division kinase 11 (CDK11), is the result of duplication of the *CDK11* gene (1). *CDK11A* and *CDK11B* encode nearly identical serine/threonine protein kinases, PITSLREB and PITSLREA respectively, both belonging to the p34CDC2 family of protein kinases (2). Full-length PITSLRE/CDK11 (commonly referred to as CDK11p110) is expressed ubiquitously throughout the cell cycle whereas a smaller, alternate transcript (CDK11p58), the result of internal ribosomal entry, is expressed only during the G2/M transition where it promotes centrosome maturation and spindle formation (3-5). During induction of apoptosis by Fas or TNF, or anoikis, PITSLRE/CDK11 is cleaved by caspases to generate p110C, an approximately 46 kDa protein that contains the catalytically active kinase domain of PITSLRE/CDK11 that interacts with and inhibits p21-activated kinase (PAK1) activity (6-8). Full length PITSLRE/CDK11 (CDK11p110) appears to participate in pre-mRNA splicing events. This is demonstrated by the observation that CDK11p110 interacts with numerous splicing factors including RNPS1, 9G8/SRSF7 and cyclin L and that CDK11p110 can phosphorylate and inhibit the splicing activity of 9G8/SRSF7 (9-11).

Background References

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4. Petretti, C. et al. (2006) *EMBO Rep* 7, 418-24.
5. Wilker, E.W. et al. (2007) *Nature* 446, 329-32.
6. Chen, S. et al. (2003) *J Biol Chem* 278, 20029-36.
7. Lahti, J.M. et al. (1995) *Mol Cell Biol* 15, 1-11.
8. Ariza, M.E. et al. (1999) *J Biol Chem* 274, 28505-13.
9. Hu, D. et al. (2003) *J Biol Chem* 278, 8623-9.
10. Loyer, P. et al. (1998) *J Cell Sci* 111 (Pt 11), 1495-506.
11. Dickinson, L.A. et al. (2002) *J Biol Chem* 277, 25465-73.

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 **IP:** Immunoprecipitation

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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Limited Uses