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CIN85 (D1A4) Rabbit mAb**Cell Signaling**
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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M Mk	Endogenous	78, 82	Rabbit IgG	#Q96B97	30011

Product Usage Information**Application****Dilution**

Western Blotting

1:1000

Immunoprecipitation

1:200

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

CIN85 (D1A4) Rabbit mAb recognizes endogenous levels of total CIN85 protein. This antibody also detects CIN85 isoform b (CD2BP3) and CIN85 isoform c. This antibody does not cross-react with CMS/CD2AP.

Species predicted to react based on 100% sequence homology:

Rat, Hamster, Bovine, Dog, Pig

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Lys485 of human CIN85 protein.

Background

CIN85 was independently identified as Cbl-interacting protein of 85 kDa (1), Ruk (regulator of ubiquitous kinase) (2), SETA (SH3 domain-containing gene expressed in tumorigenic astrocytes) (3), and SH3KBP1 (SH3 domain kinase binding protein 1) (4). The genes encoding these proteins were isolated from either human (CIN85), rat (Ruk and SETA), or mouse (SH3KBP1) sources and share between 92% and 97% sequence identity, suggesting that they represent homologues of one gene. Differential promoter usage and alternative splicing is thought to occur in a tissue specific and developmentally regulated manner to generate a complex expression pattern of various transcripts and encoded protein isoforms (5). The main isoform in humans, CIN85, contains three N-terminal SH3 domains, a proline-rich region harboring several P-X-X-P motifs that provide recognition sites for SH3 domain-containing proteins, a PEST sequence implicated in CIN85 degradation, and a C-terminal coiled-coil region for oligomerization (1,2,5,6). The other molecular variants of CIN85 are shorter, N-terminally truncated proteins lacking one, two, or all three of the SH3 domains (1,5,6-8). Proteomic screens suggest that CIN85 is phosphorylated at multiple sites and the role of phosphorylation of some of these sites in regulation of intra- and intermolecular interactions of CIN85 cannot be excluded. CIN85 belongs to the CD2AP/CMS family of adaptor proteins and has been shown to interact with signaling molecules such as c-Cbl, Cbl-b, BLNK, p85/PI3K, GRB2, p130 Cas, and endophilins to coordinate the activity of multiple signaling cascades. Indeed, a growing body of evidence suggests that CIN85 is required for the regulation of a variety of cellular processes including vesicle-mediated transport (9-12), signal transduction (13,14), and cytoskeleton remodelling (15).

Background References

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3. Borinstein, S.C. et al. (2000) *Cell Signal* 12, 769-79.
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5. Buchman, V.L. et al. (2002) *Gene* 295, 13-17.
6. Tibaldi, E.V. and Reinherz, E.L. (2003) *Int Immunol* 15, 313-29.
7. Bögl, O. et al. (2000) *Neuro Oncol* 2, 6-15.
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9. Havrylov, S. et al. (2008) *Traffic* 9, 798-812.
10. Kowanetz, K. et al. (2004) *Mol Biol Cell* 15, 3155-66.
11. Petrelli, A. et al. (2002) *Nature* 416, 187-90.
12. Soubeyran, P. et al. (2002) *Nature* 416, 183-7.
13. Borthwick, E.B. et al. (2004) *J Mol Biol* 343, 1135-46.
14. Peruzzi, G. et al. (2007) *J Immunol* 179, 2089-96.

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 **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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