

Publication

Activation of the cAMP/protein kinase A signalling pathway by coronin 1 is regulated by cyclin-dependent kinase 5 activity

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Coronins constitute a family of conserved proteins expressed in all eukaryotes that have been implicated in the regulation of a wide variety of cellular activities. Recent work showed an essential role for coronin 1 in the modulation of the cAMP/PKA pathway in neurons through the interaction of coronin 1 with the G protein subtype $G_{\alpha s}$ in a stimulus-dependent manner, but the molecular mechanism regulating coronin 1- $G_{\alpha s}$ interaction remains unclear. We here show that phosphorylation of coronin 1 on Thr(418/424) by cyclin-dependent kinase (CDK) 5 activity was responsible for coronin 1- $G_{\alpha s}$ association and the modulation of cAMP production. Together these results show an essential role for CDK5 activity in promoting the coronin 1-dependent cAMP/PKA pathway.

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