

Protein kinase CK2: An enzyme with multiple substrates and a puzzling regulation

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Protein kinase CK2 (also known as casein kinase II) is a ubiquitous eukaryotic ser/thr protein kinase present in the nucleus and cytoplasm. CK2 is known to phosphorylate more than 100 substrates, many of which are involved in the control of cell division and in signal transduction. The review centers on the structure and function of CK2 α and β subunits and on the regulation of its activity, a topic that remains to be elucidated. An analogy is drawn between CK2 and the cyclin-dependent kinases (cdks); both types of protein kinases share many substrates and are activated by regulatory subunits.