

Several enzymes implicated in the ATP metabolism such as an spinach chloroplast ATP synthase [60] and a pea nuclei apyrase [61] are also CK2 *in vitro* substrates. Other plant CK2 targets are a soybean lipoxygenase [62] and a proteasome subunit [63]. In pea nuclei, CK2 has been found in the lamina-matrix and it is able to phosphorylate a lamina-like protein [7].

In yeast and in mammalian cells it has been demonstrated the involvement of CK2 in cell cycle control. Using the synchronizable tobacco BY-2 cell line it has been reported that the Ck2 activity oscillates during the cell cycle, peaking at G1/S and M phases [15]. It is proposed that the CK2 $\beta$  regulatory subunits may play a central role in controlling the level of CK2 activity. Recently, it has been reported that CK2 is involved in the activation of the Salicylic acid-mediated pathway [64], which is one of the most studied pathways in the plant defense reactions. It is the first time in which activation of the CK2 by a plant hormone is reported.

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