

**STRUCTURE, REGULATION AND FUNCTION OF PKB/AKT
- A MAJOR THERAPEUTIC TARGET**

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The proto-oncogene protein kinase B (PKB), also known as c-Akt, is a member of the second-messenger regulated subfamily of protein kinases [1-7]. PKB is the major downstream target of receptor tyrosine kinases that signal via the phosphoinositide (PI) 3-kinase. Receptor-activated PI 3-kinase produces the lipid second messenger PI-3,4,5-trisphosphate, leading to membrane attachment and subsequent phosphorylation and activation of PKB. Activated PKB is implicated in glucose metabolism, transcriptional control, and in the regulation of apoptosis in many different cell types, including neurones. Furthermore, it is a central player in a signaling pathway of which many components (including PTEN, a negative regulator of this pathway) have been linked to tumorigenesis. Recent developments regarding the regulation of this signalling cassette will be presented.

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