Tools to Study the Activation of CaM KII in Neuronal Functions

ABSTRACT

Protein kinases play an important role in cell signaling and in various cellular functions such as neurotransmitter release, long-term potentiation, the mediation of hormonal actions and in regulation of ion channel responses to extracellular signals. The availability of the appropriate tools to study protein kinases in neuronal signaling will certainly hasten the pace of discoveries and understanding of the mechanisms involved in neuronal growth, signaling and neurodegeneration. We have developed two such reagents, the SignaTECT® CaM KII System and Anti-ACTIVE® CaM KII pAb, Rabbit, (pT286). The SignaTECT® System can be used to detect the kinase activity and the activation of CaM KII with high sensitivity (i.e., nanogram level of enzyme). Anti-ACTIVE® CaM KII pAb, Rabbit, (pT286) can detect the phosphorylation of a threonine residue that is critical to CaM KII regulation as a result of enzyme autophosphorylation under increased calcium signaling. These reagents will allow researchers to study CaM KII signaling in various model systems including neuronal cultures, PC12 cells and brain tissue.

Promega Notes ***76****, 6–9.*

Said Goueli
Promega Corporation

Publication Date: 2000

Download Article

(237 KB)