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Biology 322 Quiz

ERK Pathways

The pathway that these four proteins appear in are the ERK pathway. In order to understand how these proteins are related we must first understand what each protein does. The c-RAF initiates a MPAK cascade in the phosphorylation of MEK1 and 2. The son of sevenless is a molecular switch that binds to downstream effectors such as c-raf and localize them to the membrane resulting in the c-raf activation. MEK1 is a dual-specificity protein kinase which is phosphorylated and and actived by c-RAF. RAS activates the C-RAF kinase, it also binds and can hydrolyze GTP.

The order in which these proteins appear in the ERK pathway are RAS, Son of Sevenless, C-RAF, and MEK1 and 2. The ERK pathway can be activated in response to growth factors and cytokines.

**Sources**

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