Mitogen-induced tyrosine phosphorylation of 41 kDa and 43 kDa proteins.
Michiaki Kohno*, Yuji Chatani, Eiko Tanaka, Akira Hattori, Naomi Nishizawa

We have examined the possible involvement of pertussis toxin (PT)-sensitive GTP-binding protein and protein kinase C (PKC) in mitogen-induced tyrosine phosphorylation of the 41 kDa and 43 kDa cytosol proteins using PT-pretreated (inactivation of PT-sensitive GTP-binding protein) or phorbol 12-myristate 13-acetate (PMA)-pretreated (depletion of PKC) mouse fibroblasts. The effects of the inactivation of PT-sensitive GTP-binding protein and the depletion of PKC on mitogen-stimulated tyrosine phosphorylation of the proteins were similar and varied significantly and systematically in response to growth factors.

Tissue-specific Expression of Two Isoforms of Chicken Fibroblast Growth Factor Receptor, bek and Cek3.
Masahiro Sato*, Taro Kitazawa, Atsushi Katsumata, Masafumi Muramoto, Toshiya Okada, Tatsuo Takeya

Chicken bek and Cek3 are isoforms of the fibroblast growth factor receptor which consist of primary structures that are identical except for a variation within the last of three immunoglobulin-like repeats in the ligand-binding domain. Northern blot analysis using isoform-specific probes revealed that the bek mRNA is expressed exclusively in lung, whereas the Cek3 mRNA is expressed prominently in brain and weakly in lung. We further localized these transcripts in brain and lung by in situ hybridization histochemistry.

The First Successful Polar Cycloaddition of 1-Benzothiopyrylum Salts with Conjugated Dienes and Transformation of the Cycloadducts.
Hirosi Shimizu*, Shojiro Miyazaki, Tadashi Kataoka, Mikio Hori

A variety of 3- and/or 4-substituted 1-benzothiopyrylum salts underwent polar cycloaddition with conjugated dienes such as unsubstituted or 2- and/or 3-substituted buta-1,3-dienes to give benzo-fused bicyclic sulfonium salts having sulfur at a bridgehead position in good yields. The cycloaddition proceeded regio- and stereospecifically. The reactions of the cycloadduct bearing a cyano group at γ-position to sulfur with various bases were performed with a view to its ring transformation. Strong and weak bases both caused a similar ring transformation to give a spiro compound and a peroxide, the latter compound as a diastereoisometric mixture. The radical mechanism for the formation of these two products was proposed.