Peptide Inhibitors/Activators of Src and Src Family Kinases

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Technology description

Background:
The technology may be useful as therapeutics and/or as a protomer for developing better therapeutics for treatments of cancer and other diseases in which Src and Src family kinases are either highly elevated or genetically and/or functionally reduced. These disease states include, but not limited to, leukemia, prostate and breast cancers, uremic cardiomyopathy, hypertension, cardiac fibrosis, and comprised myocardial contractility.
Thus far, many inhibitors have been developed, and most of them are developed as ATP analogs that compete for ATP binding to these kinases, resulting in inhibition of kinase activity. However, the lack of pathway specificity is a major disadvantage of the current Src inhibitors. Since Src and Src family kinases are essential for many cellular functions, a generic inhibition could compromise the overall benefit of the treatment.
Invention Description:
Novel Na/K-ATPase-specific Src inhibitor or activator which contributes to the development of increasingly more effective therapeutic, diagnostic, or prophylactic agents and having fewer side effects.

Application area

·Monitoring kinase enzymatic activities that are adaptable to high-throughput screening methods
·Isolating operationally defined ligands involved in protein-protein interactions
·Identifying an exhaustive set of modular domain-containing proteins implicated in binding with the ligands

Advantages

·Whole families of related proteins could be identified

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