An Improved Screening Assay for Thrombin Receptor Antagonists

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Technology description

Summary

An Assay for Thrombis Receptor Activation and Its Application to the Identification of thrombin Receptor Antagonists

Description

Thrombin and thrombin receptors are important in the development of the platelet plug and fibrin clot that are normally formed during vascular injury. However, they are also involved in events leading to strokes, myocardial infarcts, and other cardiovascular diseases. Accordingly, there is considerable effort being expended to find inhibitors of these compounds. The current screening methods require fresh human platelets and are therefore limited by reagent toxicity to platelets when used in the tests. These assays also do not appear to be receptor-specific. There has not been an available assay for screening large compound libraries for potential antagonists of thrombin receptor activity. Researchers at the University of Pennsylvania have developed an antagonist-screening assay that is specific for the thrombin receptor. This method also allows researchers to perform the assay in micro-titer plates, provides a high signal to noise ratio and relative insensitivity to the reagents used in traditional assays. Further, the assay uses cells easily grown in culture, rather than freshly collected human platelets.

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