Non-Toxic Probe for Cell Staining

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Technology description

Short Description

Novel non-toxic reagent for specifically detecting a cell membrane component

Abstract

Northwestern University researchers have developed a new reagent for specifically staining phosphatidylethanolamine (PE) in cell membranes. PE is a major phospholipid found in cellular membranes, but it is difficult to study due to a dearth of molecular probes for its detection. There are only two specific PE binding molecules, and these exhibit toxicity when used in cell biology studies. This novel reagent modifies one of these PE-binding molecules such that its toxicity is drastically lowered. Furthermore, the staining process is simplified as this novel probe is rendered fluorescent by conjugation of GFP. This innovative staining reagent will enable all manner of cell biology studies as it can be used in conjunction with flow cytometry and fluorescense microscopy for cell and tissue staining.

Application area

Live cell staining

Microinjection studies

Tissue and vesicular staining

Flow cytometry and fluorescence microscopy

Advantages

Nontoxic

Simple, single step staining

Specific for PE

Intense fluorescent signal

Institution

Northwestern University

Inventors

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