

Cancer Biology Kit -Fluorescent Staining Lab - membrane-bound estrogen receptor (mER) Biomarker

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This section contains information about fluorescent staining and how it can be used to detect cellular structures and proteins. In this kit, fluorescent staining is used to detect the presence of a protein called membrane-bound estrogen receptor (mER), which is a biomarker for breast cancer.

The materials include information about:

- fluorescence
- fluorescent cell staining
- the mER biomarker

A. Fluorescent Staining Slide Deck

This section contains a powerpoint introducing fluorescence and the use of fluorescently labeled antibodies to detect cellular structures or proteins in cell biology.

Fluorescent Cell Staining Cancer Kit 050919.pptx

B. Fluorescent Cell Staining Activity

This section contains information about the fluorescent cell staining 'wet lab' and 'dry lab' options, and photographic images of the stained patient cells.

Cancer Biology Fluorescent Cell Staining Protocol

Cancer Biology Paper Fluorescent Cell Staining Activity Student Version

Cancer Biology Paper Fluorescent Cell Staining Activity Teacher Key

Cancer Biology - Fluorescent Cell Staining Patient Results

Cancer Biology - Fluorescent Cell Staining - Slides for Laminating

C. Allen Institute Resources (add on lessons)

The first Allen Institute link connects with lessons developed by Allen Inst. educators about mitosis and microscopy that contain some helpful data sets, videos, animations and lessons about cellular structure the use of fluorescent cell labeling/microscopy. The

second Allen Inst. link connects with stories about local biology teachers who have developed lessons using the Allen Inst. cell biology tools.

<https://alleninstitute.org/about/education-outreach/mitosis-and-microscopy/>

<https://alleninstitute.org/what-we-do/cell-science/news-press/articles/cell-shorts-bringing-cell-science-resources-classroom>