

BODIPY(493/503) Staining for Lipid Droplets

Fluorescent staining protocol for visualizing cellular lipid droplets

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Overview

BODIPY 493/503 is a lipophilic fluorescent dye used to visualize neutral lipid storage organelles (lipid droplets) in cells. This protocol provides methods for staining both adherent and suspension cells.

Applications:

- Lipid metabolism studies
- Adipocyte differentiation
- Lipid droplet dynamics
- Oleic acid or fatty acid treatment experiments
- Metabolic disease research

Fluorescence Properties

- **Excitation:** 493 nm
- **Emission:** 503 nm
- **Color:** Green fluorescence
- **Compatible with:** FITC/GFP filter sets

Key Features

- Rapid staining (1-2 hours)
- Live or fixed cells
- Compatible with DAPI nuclear staining
- Minimal background fluorescence

Safety Considerations

- BODIPY is dissolved in DMSO - handle with care
- DMSO can facilitate absorption of other chemicals through skin
- Wear gloves and work in biosafety cabinet when handling cells
- Dispose of fluorescent dye waste properly

Protocol adapted from laboratory procedures

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