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Isolation and Transfection of Nicotiana benthamiana Mesophyll Protoplasts for Fluorescent Protein Visualization

This protocol is a draft, published without a DOI.

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Protocol status: Working
We use this protocol and it's working

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Abstract

Protoplast transfection is routinely used to study the sub-cellular localization of fluorescent-tagged proteins. Using *N. benthamiana* protoplasts is advantageous as it is a hardy plant that grows well, especially in tropical climates. Isolating protoplasts from the leaves of young 3-4-week-old *N. benthamiana* plants compensates for the benefits of using the ephemeral *Arabidopsis*. Moreover, the larger protoplast size of *N. benthamiana* offers better visualization of fluorescent proteins at lower magnifications. The protocol described here is an easy method for *N. benthamiana* protoplast isolation and transfection with simple and economical modifications to increase yield and transfection efficiency. The protocol is optimized for easy performance with minimal laboratory equipment.

Attachments

DOCX

Protoplast isolation...

4MB