

Histochemical staining for GUS activity

Judelson protocol

Staining solution

50 mM NaPO₄, pH 7.0

0.1% Triton X-100

0.1% X-Gluc (bromochloroindoyl-b-glucuronide) in dimethyl formamide
store this in the dark! When it turns red, it has gone bad.

optional reagents to increase sensitivity (oxidation catalysts)

5 mM potassium ferricyanide (K₃Fe(CN)₆)

5 mM potassium ferrocyanide (K₄Fe(CN)₆)

Procedure

1. Staining fungal mycelia

Place a tuft of mycelia in a microfuge tube or microtiter plate.

Add staining solution to cover

Place at 37C Color will appear in 5-60 minutes; can stain overnight if desired

2. Staining plant material

Place entire leaf (or cut off small pieces from leaf) in staining solution

Vacuum infiltrate (suck vacuum and release; may need to repeat until air removed from leaf).

Incubate at 37C overnight

Decolorize with 95% ethanol; rinse several times; do final rinse in water before viewing under microscope