Histochemical Detection of GUS (beta-glucoronidase) (1)

Protocol

This protocol is for the Histochemical Detection of GUS (beta-glucoronidase) (1)

Staining buffer, prepare immediately before use as follows:

Stock solutions	Volume per 1 ml staining buffer	Final concentration
Water, nuclease-free	830 µl	
1 M sodium phosphate (pH 7.0)	100 µl	0.1 M
0.5 M EDTA, pH 8.0	20 µl	10 mM
10% Triton X-100	10 µl	0.1% (v/v)
50 mM $K_3Fe(CN)_6$	20 µl	1 mM
0.1 M X-Gluc (50 mg/ml) in dimethylformamide	20 µl	2 mM

Staining procedure for cells and tissues:

1. Remove media from the cells or tissue.
2. Immerse cells/tissue in fresh staining buffer.
3. Incubate cells/tissue for 12-24 hours at 37°C.
4. Remove the staining buffer.
5. Wash with several changes of 50% ethanol (up to 12 hours per wash), until the cells/tissue clears.
6. Count dark blue cells.

Reference

1. Jefferson, R., Assaying chimeric genes in plants: the GUS gene fusion system, *plant Mol Biol Rep*, 5, 387-405, 1987.

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