Title Advances in understanding pectin methylesterase inhibitor in kiwi fruit: an immunological approach
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Citation Planta, 233, Number 2, 287-298, 2011

Keywords Immunolocalisation; Kiwi fruit; Monoclonal antibodies; Pectin methylesterase inhibitor

Abstract

In order to gain insight into the in situ properties and localisation of kiwi pectin methylesterase inhibitor (PMEI), a toolbox of monoclonal antibodies (MA) towards PMEI was developed. Out of a panel of MA generated towards kiwi PMEI, three MA, i.e. MA-KI9A8, MA-KI15C12 and MA-KI15G7, were selected. Thorough characterisation proved that these MA bind specifically to kiwi PMEI and kiwi PMEI in complex with plant PME and recognise a linear epitope on PMEI. Extract screening of green kiwi (*Actinidia deliciosa*) and gold kiwi (*Actinidia chinensis*) confirmed the potential use of these MA as probes to screen for PMEI in other sources. Tissue printing revealed the overall presence of PMEI in pericarp and columella of ripe kiwi fruit. Further analysis on the cellular level showed PMEI label concentrated in the middle lamella and in the cell-wall region near the plasmalemma. Intercellular spaces, however, were either completely filled or lined with label. In conclusion, the developed toolbox of antibodies towards PMEI can be used as probes to localise PMEI on different levels, which can be of relevance for plant physiologists as well as food technologists.

http://www.springerlink.com/content/nq411634820g28qq/fulltext.pdf