

Abstract

We are interested in constructing a promoter that is rapidly and specifically turned on in produce after harvest. As a step towards this, we have focused on studying the regulation of the asparagine synthetase (AS) promoter of *Asparagus officianlis*. This promoter is rapidly and strongly unregulated in broccoli after harvest. Previous work where the 2kb AS promoter was truncated revealed a 117 bp region that was able to confer harvest response when fused to a harvest –non-responsive truncated version of the AS promoter to retain harvest induction ability of the promoter to retain harvest induction when regions within the 117bp are mutated. We also report on experiments designed to clarify what we mean when we say harvest response and what factors might be contributing to the regulation of a promoter which turns on after harvest.