

Aldo-keto reductases (AKRs) play important roles in aldehyde detoxification as well as primary and secondary metabolism in plants. We previously reported inducible expression of a *Solanum lycopersicum* AKR4B (*SlAKR4B*) in tomato leaves treated with salicylic acid and jasmonic acid, and high promoter activity of *SlAKR4B* in tomato leaf protoplasts. In this study, we investigated the expression response of *SlAKR4B* in the tomato leaves with infiltration treatment and the *cis*-element(s) involved in high promoter activity. Gene expression analysis in tomato leaf protoplasts and buffer-infiltrated tomato leaves suggested that cell damage caused the increased expression of *SlAKR4B*. Promoter activity of *SlAKR4B* was significantly reduced by mutation of two G-box like elements. It is suggested that the two G-box like elements are responsible for the high promoter activity.

The two G-box-like elements located at -585 to -582 bp and -510 to -507 bp of *SlAKR4B* promoter are essential to high promoter activity.