Abstract

Soybean (*Glycine max* L.) storage proteins are composed mainly of two major components, β-conglycinin and glycinin. Electrophoretic variants of the β subunit of β-conglycinin and the A3 polypeptide of glycinin were detected on SDS-PAGE, and designated them as β* and A3*, respectively. β* and A3* exhibited higher and lower mobilities, respectively, than the common subunit and A3 polypeptide. The N-terminal nine and 10 amino acid sequences of β* and A3* were completely identical to the previously reported sequences of the subunit and the A3 polypeptide, respectively. Analysis using concanavalin A-horseradish peroxidase and treatment with N-glycosidase indicated that glycans were not responsible for the difference in electrophoretic mobility of β* or A3*. Furthermore, five clones of β* or β and three clones of A3*, respectively, were sequenced but we could not detect deletions and insertions except for a single or a few amino acid substitutions as compared with the common β subunit and A3 polypeptide. These results indicate that a single or a few amino acid substitution affects the electrophoretic mobilities of β* and A3*.