



Supplemental Figure 1. Phylogenetic relationships of InvB-related proteins by a bootstrap neighbor-joining tree analysis

The amino acid sequences of the genes listed in Supplemental Table 1 were aligned with yeast VRG4 and *Arabidopsis* GONST1 on the MUSCLE Web server (<http://www.ebi.ac.uk/Tools/muscle/index.html>; Edgar, 2004) and then subjected to a bootstrap neighbor-joining tree analysis by ClustalX ver. 1.83 (exclude positions with gaps = ON, correct for multiple substitutions = ON, n=10000; Thompson et al., 1997). The resulting phylogenetic tree was drawn with the unrooted version of njplot software for Macintosh (<http://pbil.univ-lyon1.fr/software/njplot.html>) and was then arranged by Adobe Illustrator CS3. The scale indicates the number of amino acid replacements per residue. The numbers at branch points are bootstrap percentage for 10000 replicates and thicker line segments are used to connect branchpoints supported by >70% bootstrap. *C. reinhardtii* GST1b is not included in the analysis because it is almost identical to GMT1a.

References

Edgar, R.C. (2004). MUSCLE: Multiple sequence alignment with high accuracy and high throughput. **Nucleic Acids Res.** 32: 1792–1797.
 Thompson, J.D., Gibson, T.J., Plewniak, F., Jeanmougin, F., and Higgins, D.G. (1997). The CLUSTAL_X windows interface: Flexible strategies for multiple sequence alignment aided by quality analysis tools. **Nucleic Acids Res.** 25: 4876–4882.