



Additional file 2: Formation of lariciresinol **4** or secoisolariciresinol **5** from pinoresinol **3** in the reactions with cleared cell lysates of different *E. coli* strains expressing the reductase AtPrR2 **(a)** or the reductase FiPLR **(b)**. Reaction conditions: 50 mM KPi-buffer, pH 7.5, 0.2 mM pinoresinol **3**, 50 μ l cleared cell lysate containing AtPrR2 or FiPLR, 0.2 mM NADPH. Optionally, 3 U ml⁻¹ GDH and 20 mM D-glucose were added for cofactor regeneration (cr). The reactions were incubated at 25°C for 16 h. Besides formation of lariciresinol **4** or secoisolariciresinol **5**, no other reaction products were observed.