SUPPORTING INFORMATION

Production of deuterated Cyanidin *3-O*-glucoside from recombinant *Escherichia coli*

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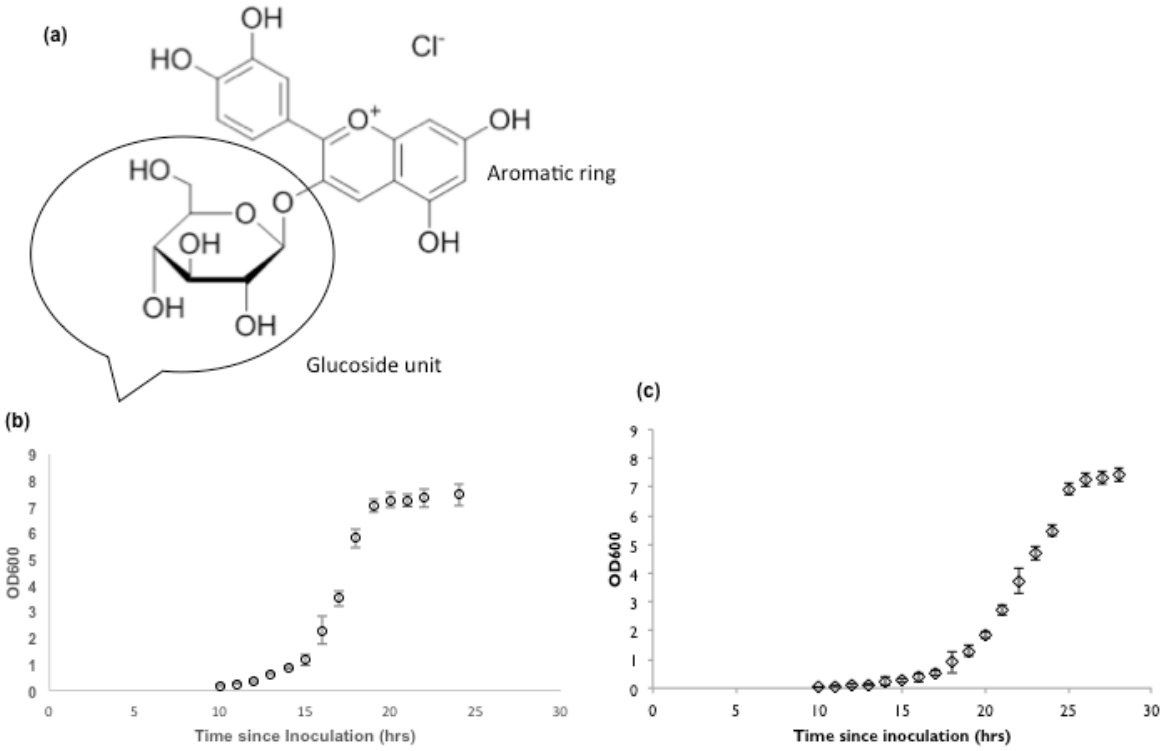

Figure S1. Structure of anthocyanidin glucosides (C3G) (a). Growth curve of *E. coli* (At3GT and PhANS) in AMM media supplemented with glucose (b) and glycerol (c).

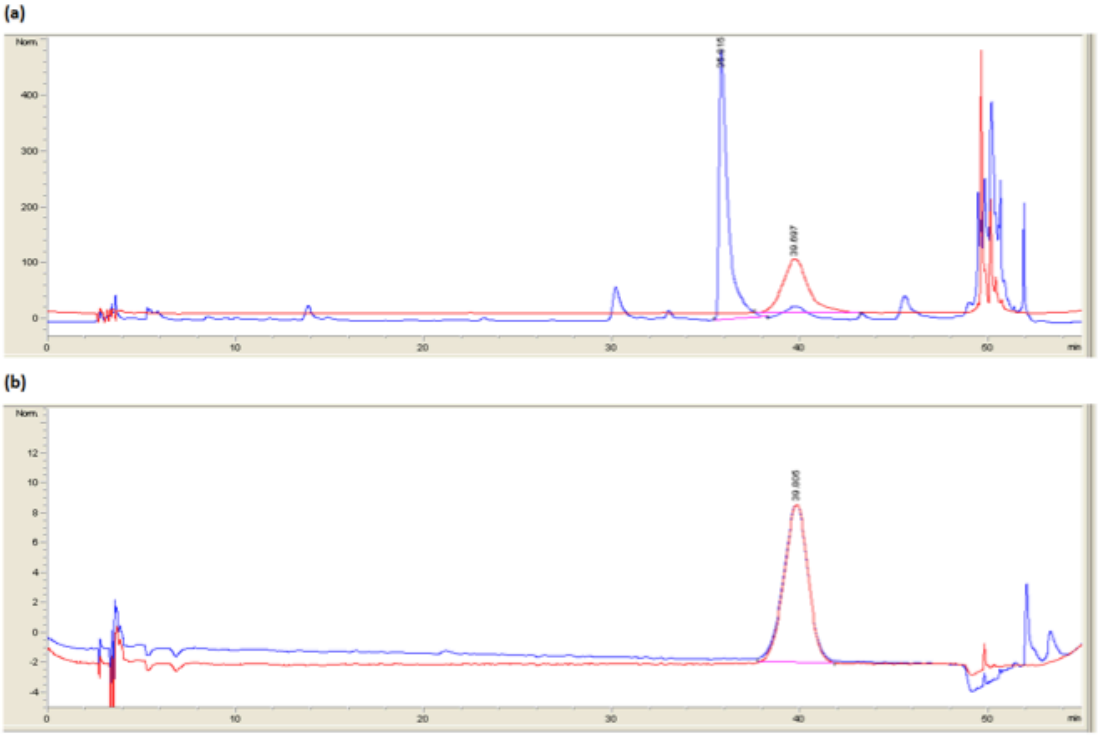

Figure S2. Purification of Deuterated cyanidin glucosides from other compounds in cell broth. HPLC peak at 39.0 min at wavelength 520 nm (Red) and 280 nm (blue) shows deuterated cyanidin glucosides (a), Pure standard of cyanidin glucosides (b).

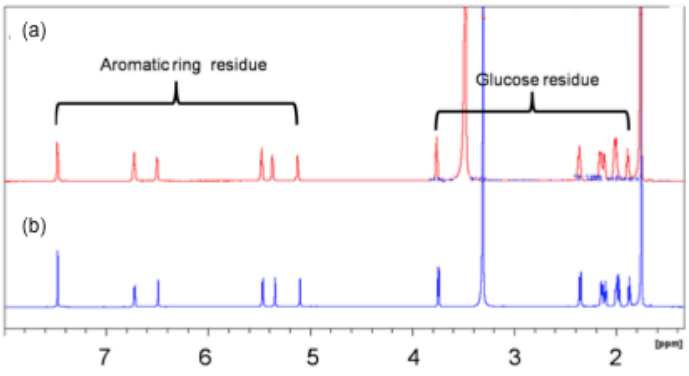

Figure S3. ^{1}H NMR comparison between 1% DCl treated anthocyanidin (a) and commercial anthocyanidin (b). Two sets of peaks at 5.0~7.5 ppm (denoted with a bracket) and 1.8~3.8 ppm (denoted with a bracket) in both spectra correspond to aromatic protons and glucose protons on anthocyanins, respectively, and they are exactly matched. This control experiment result demonstrated that deuterated exchange would not happen when treated with 1% DCl.