



**Fig. S1. CD analysis of DBLβ3\_D4 wt, DBLβ3\_D4\_P2b\_D5 and DBLβ3\_D4\_P3a\_D5.**

(A) Secondary structure analysis of DBLβ3\_D4 wt, DBLβ3\_D4\_P2b\_D5 and DBLβ3\_D4\_P3a\_D5. Circular dichroism spectra were recorded between 195 and 260 nm at 20°C. For each sample, four measurements were averaged and corrected for buffer absorption. (B) Thermal denaturation of DBLβ3\_D4 wt, DBLβ3\_D4\_P2b\_D5 and DBLβ3\_D4\_P3a\_D5. Spectra were recorded between 200 and 250 nm. Between each measurement, the temperature was increased in 0.5°C increments. (C) Melting curve for DBLβ3\_D4 wt, DBLβ3\_D4\_P2b\_D5 and DBLβ3\_D4\_P3a\_D5. The ellipticity  $\theta$  was measured at 222 nm from 20°C to 90°C. Between each measurement, the temperature was increased in 0.5°C increments.