Supporting Information

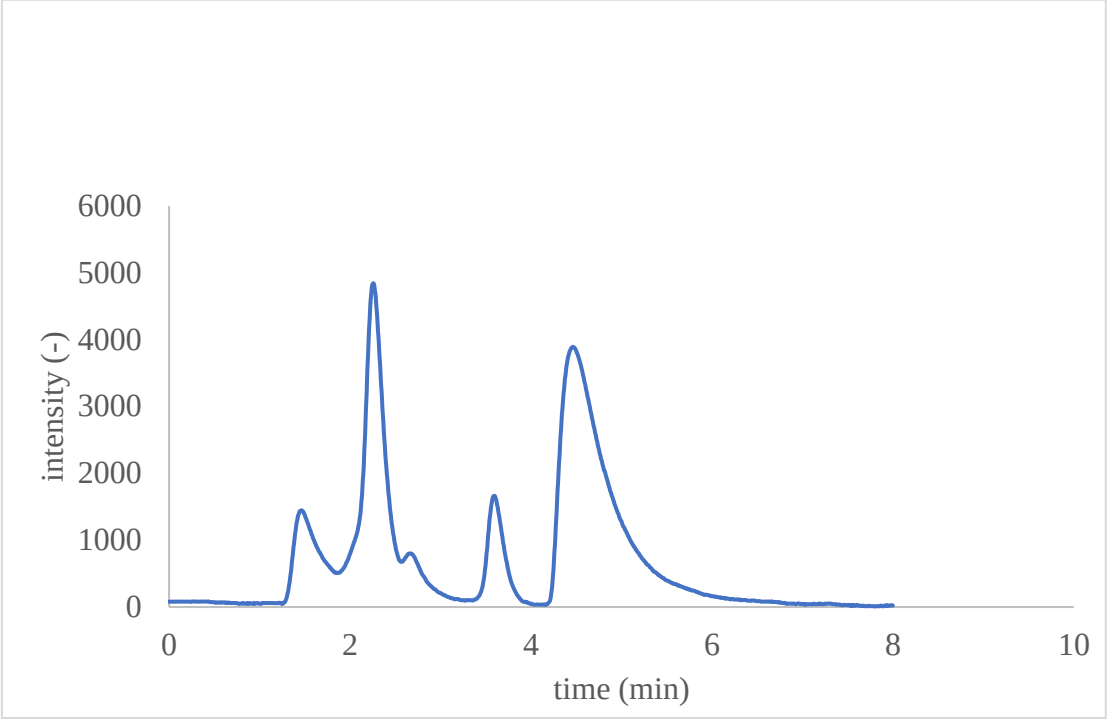

Figure S1. HPLC Chromatogram (silica, $CHCl_3$:MeOH = 98:2, 1 ml/min) of aglycone **5**, UV = 254 nm, t_R = 4.453 min.

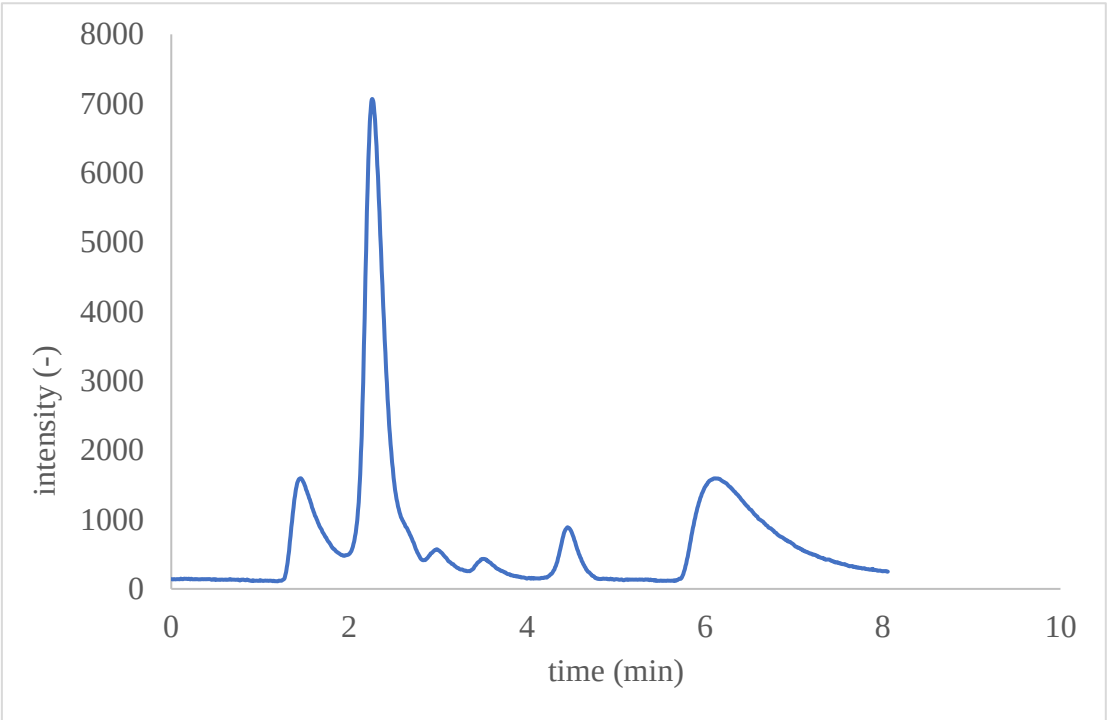

Figure S2. HPLC Chromatogram ($CHCl_3$:MeOH = 95:5, 1 ml/min) of aglycone **6**, UV = 254 nm, t_R = 3.59 min.

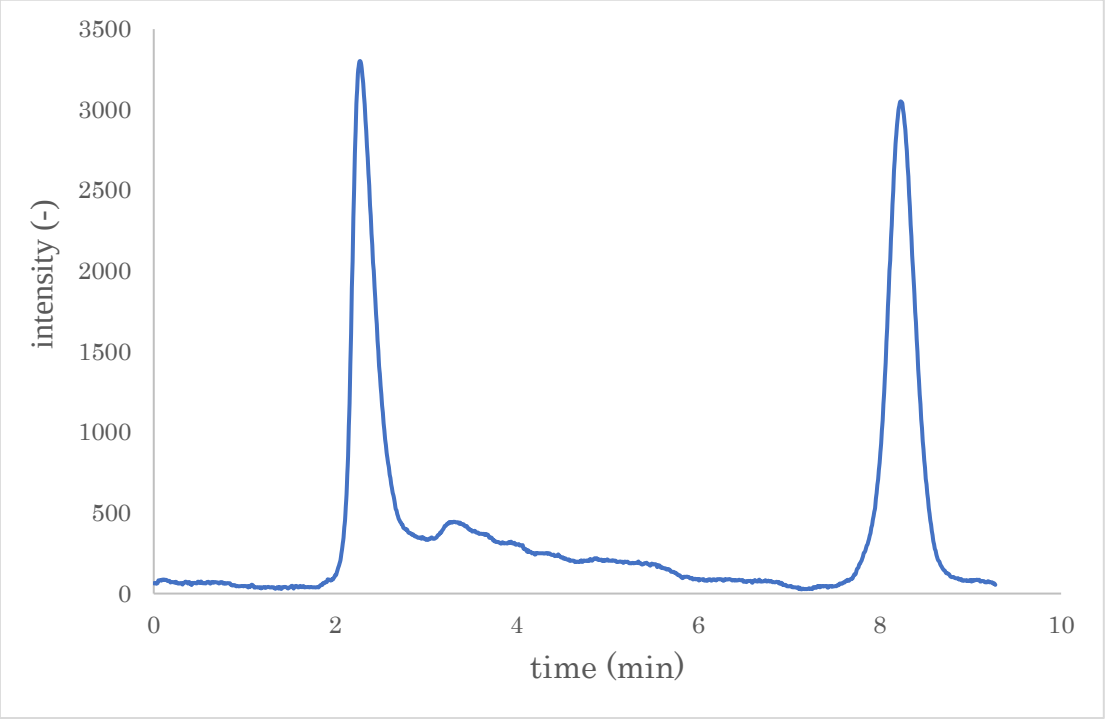

Figure S3. HPLC Chromatogram ($CHCl_3$, 1 ml/min) of aglycone **7**, UV = 270 nm, t_R = 8.22 min.

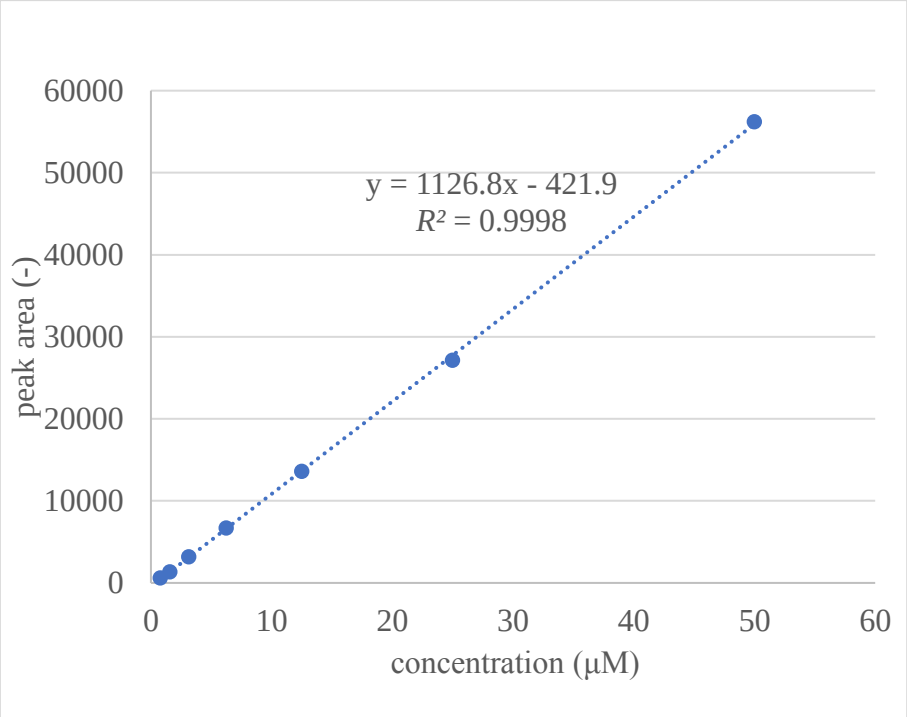

Figure S4. Calibration curve of **5** based on the HPLC analysis.

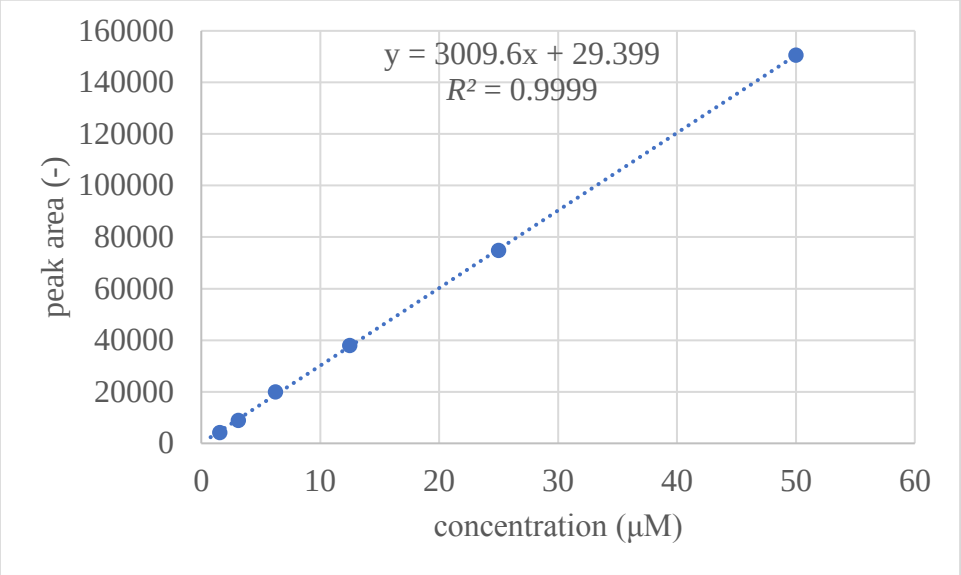

Figure S5. Calibration curve of **6** based on the HPLC analysis.

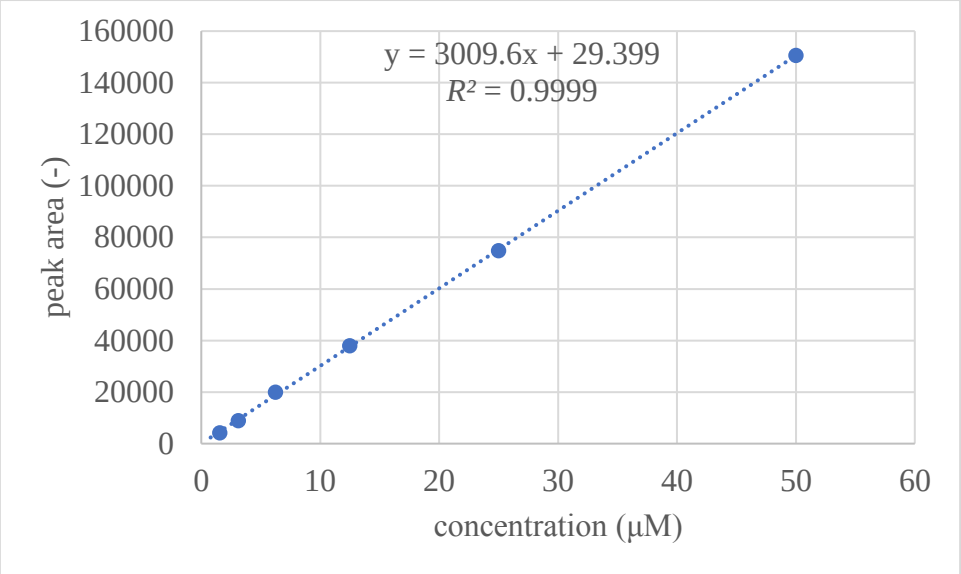

Figure S6. Calibration curve of **7** based on the HPLC analysis.

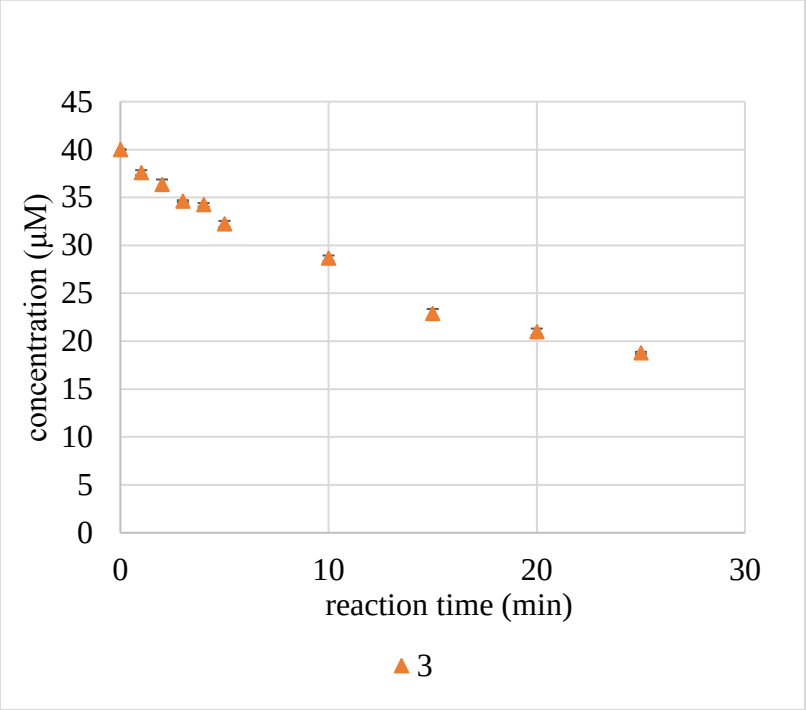

Figure S7. Time-dependent reduction profile of TEMPO *O*-galactoside **3** with 60 μL of *β*-galactosidase in 0.1 M PBS (pH 7.4) at 323 K. Each data represents mean ± S.D., n = 3.

Table S1. Pseudo-first-order rate constants k (min^{-1}) for the initial rate of reduction of TEMPO *O*-galactoside **3** with 60 μL of *β*-galactosidase at 323 K, based on the Figure S7. (mean ± S.D., n = 3)

Compound	k (min^{-1})	R^2
3	$4.2\times10^{-2} \pm 1.9\times10^{-3}$	0.99

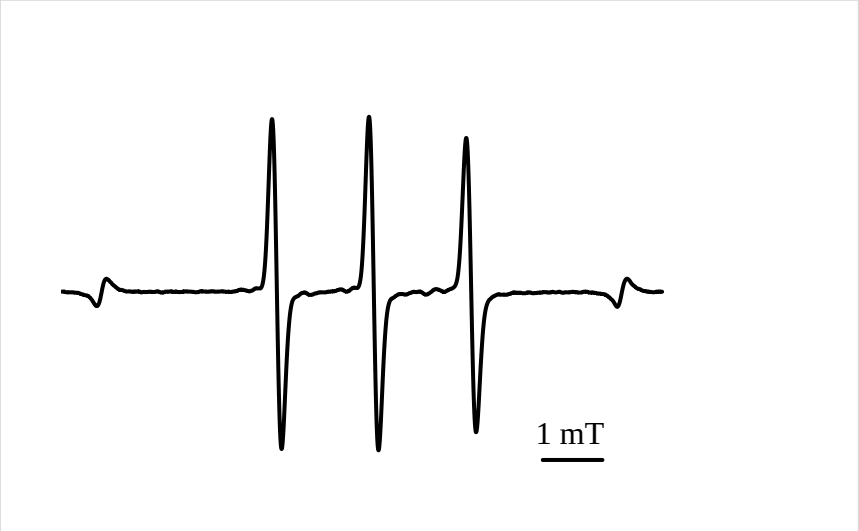

Figure S8. ESR spectrum of **2**.

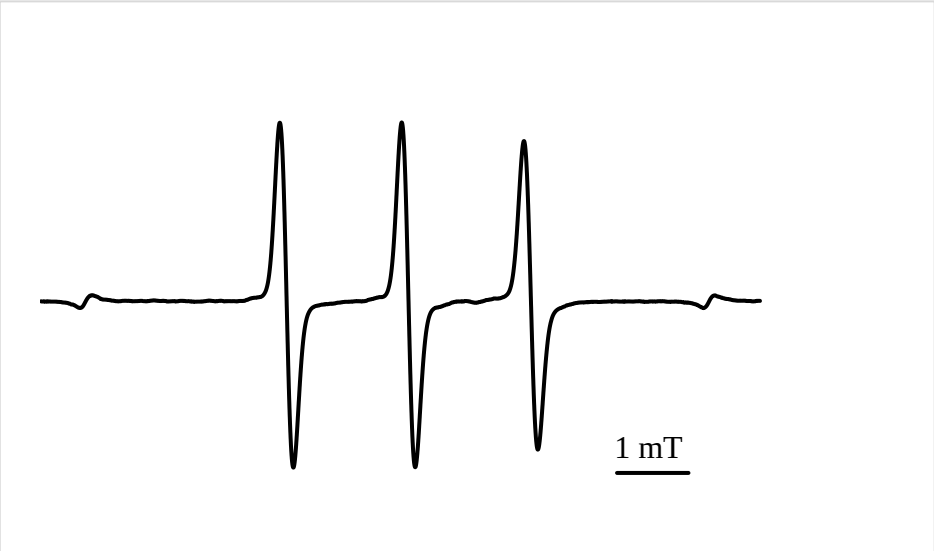

Figure 9. ESR spectrum of **3**.

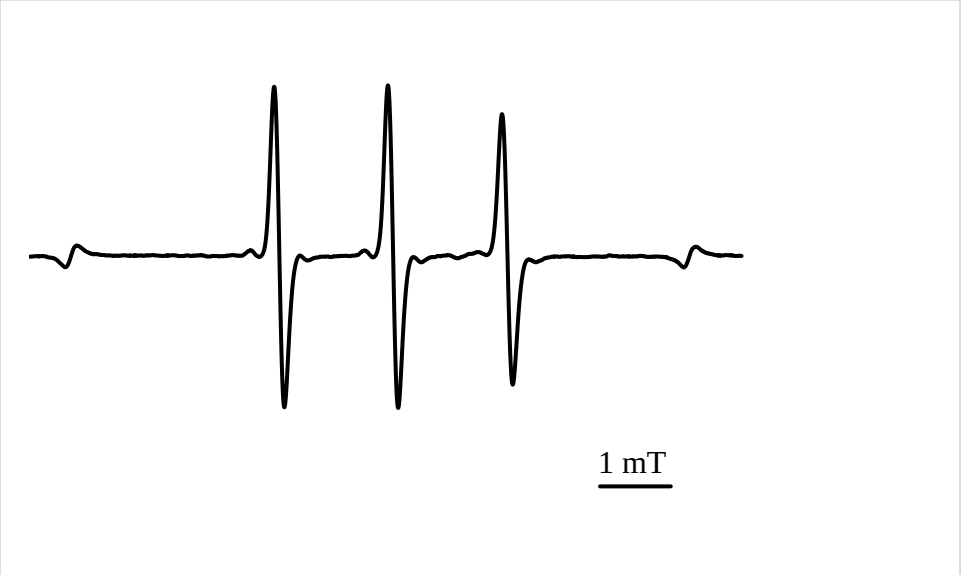

Figure 10. ESR spectrum of **4**.