



Figure S5. Characterization of wheat CCD-B1, CCD-B4, CCD-D1 and CCD-D4 activities in β -carotene producing *E. coli* cells. pAC-BETA contains all the genes for β -carotene biosynthesis. Total carotenoids extracted from growth media of *E. coli* cells co-expressing pAC-BETA and various plasmid constructs were analyzed by HPLC. The HPLC elution profiles between 5 and 11 min are shown. Ascending HPLC traces are offset by 12 s for clarity. β -ionone is indicated by arrow.