## **Supporting Information:**

## Self-Assembly of Symmetric Brush Diblock Copolymers

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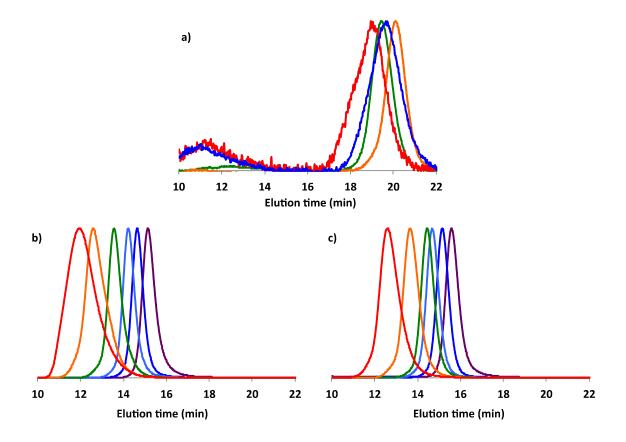
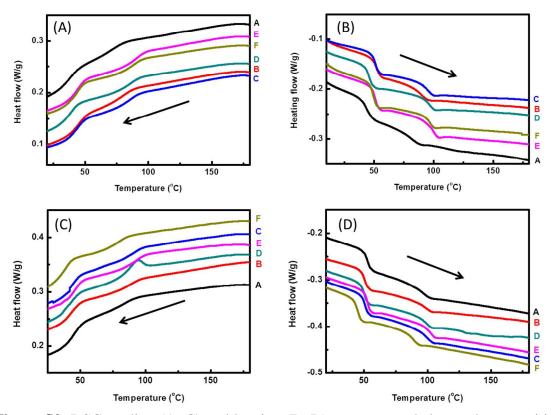
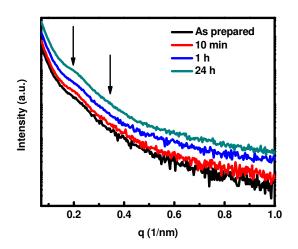


Figure S1. GPC RI traces of the polymers synthesized. All traces were obtained from polymers purified by precipitation into methanol. a) The macromonomers made, red:  $L_{4.5k}$ ; green:  $S_{4.3k}$ ; blue:  $L_{2.4k}$ ; orange:  $S_{2.4k}$ . b) Group I brush block copolymers of increasing DP from right to left (as shown in Table 1). c) Group II brush block copolymers of increasing DP from right to left (as shown in Table 1).



**Figure S2.** DSC cooling (A, C) and heating (B, D) curves revealed two glass transitions around 95°C and 50 °C, respectively. Colored curves A-F in (A) and (B) represents samples of **Group I** in **Table 1** sequentially; colored curves A-F in (C) and (D) represents samples of **Group II** in **Table 1** sequentially.



**Figure S3.** SAXS measurements of a conventional lamellar forming PS-b-PLA (21k-*b*-24.3k) BCP.