



**Fig. S1. Rb/Sr and Sr/Y filtering criteria for intermediate to felsic magmatic rocks of South China.** (A-C) Rb/Sr versus Sr/Y diagrams for Jurassic to Cretaceous intermediate to felsic magmatic rocks of South China. (D) Rb/Sr versus Sr/Y diagrams for magmatic rocks with 55-70 wt % SiO<sub>2</sub> and 1-6 wt % MgO. Published data for Cretaceous magmatic rocks formed by sufficient crystal-melt separation (30) are indicated to exclude highly fractionated and accumulated samples. After filtering, the data with  $0.05 \leq Rb/Sr \leq 0.32$  and  $10 \leq Sr/Y \leq 40$  were used to calculate the crustal thickness.