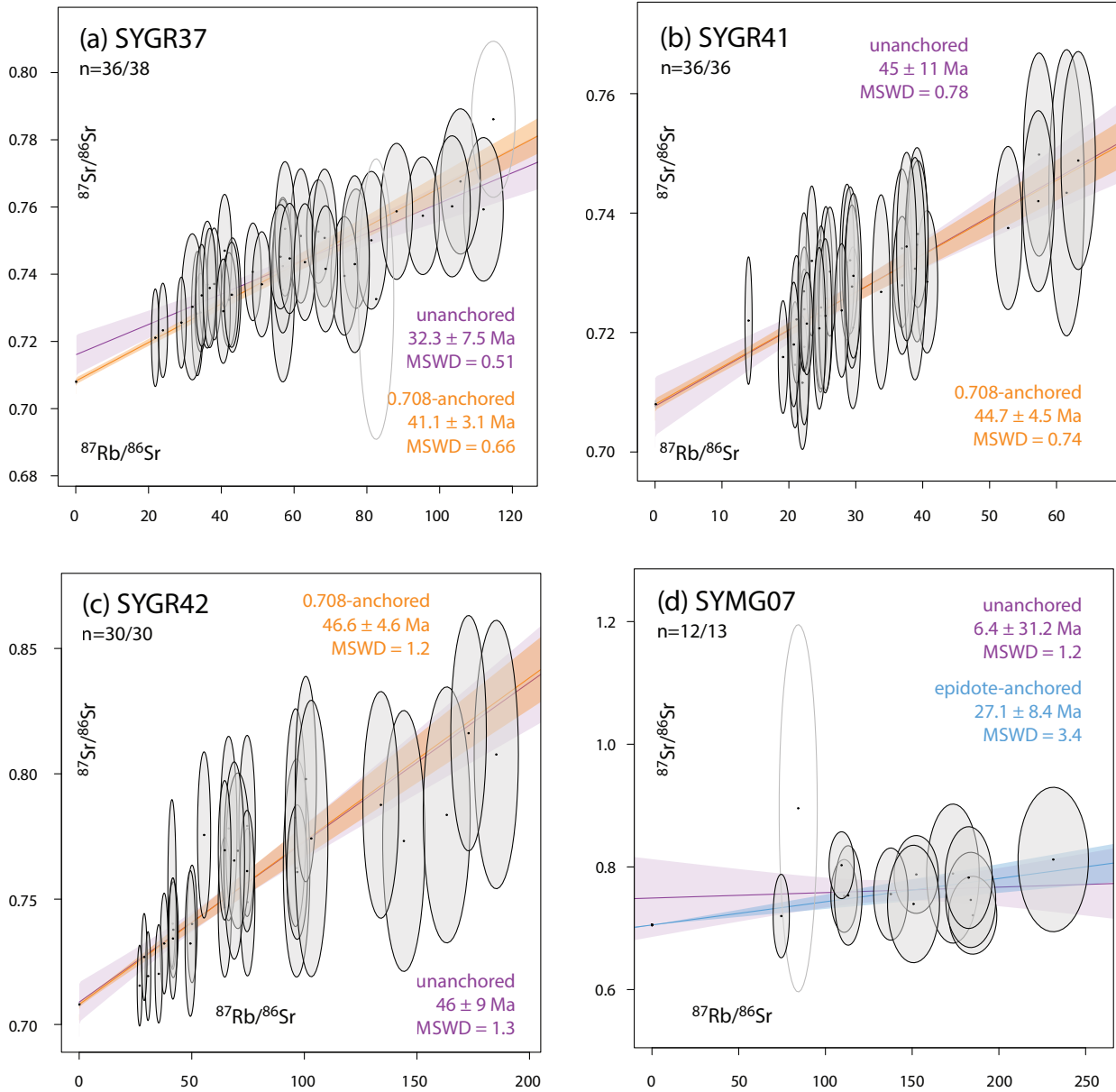
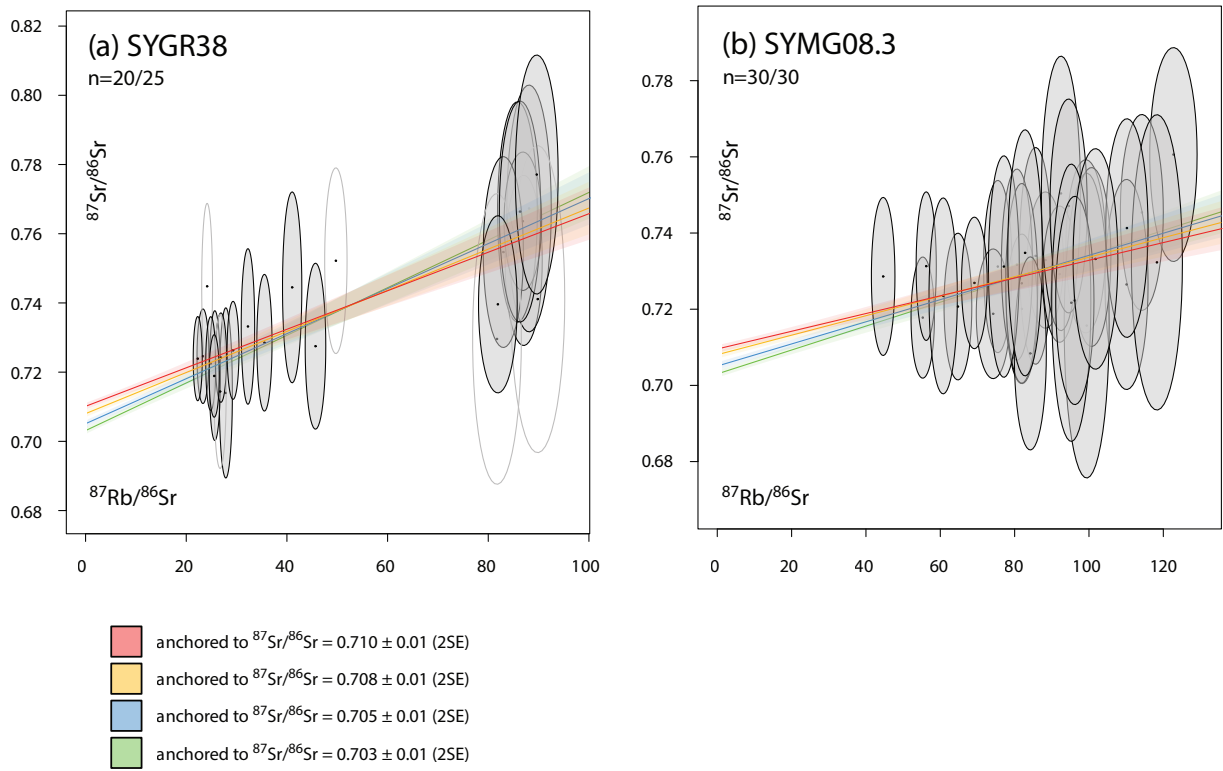


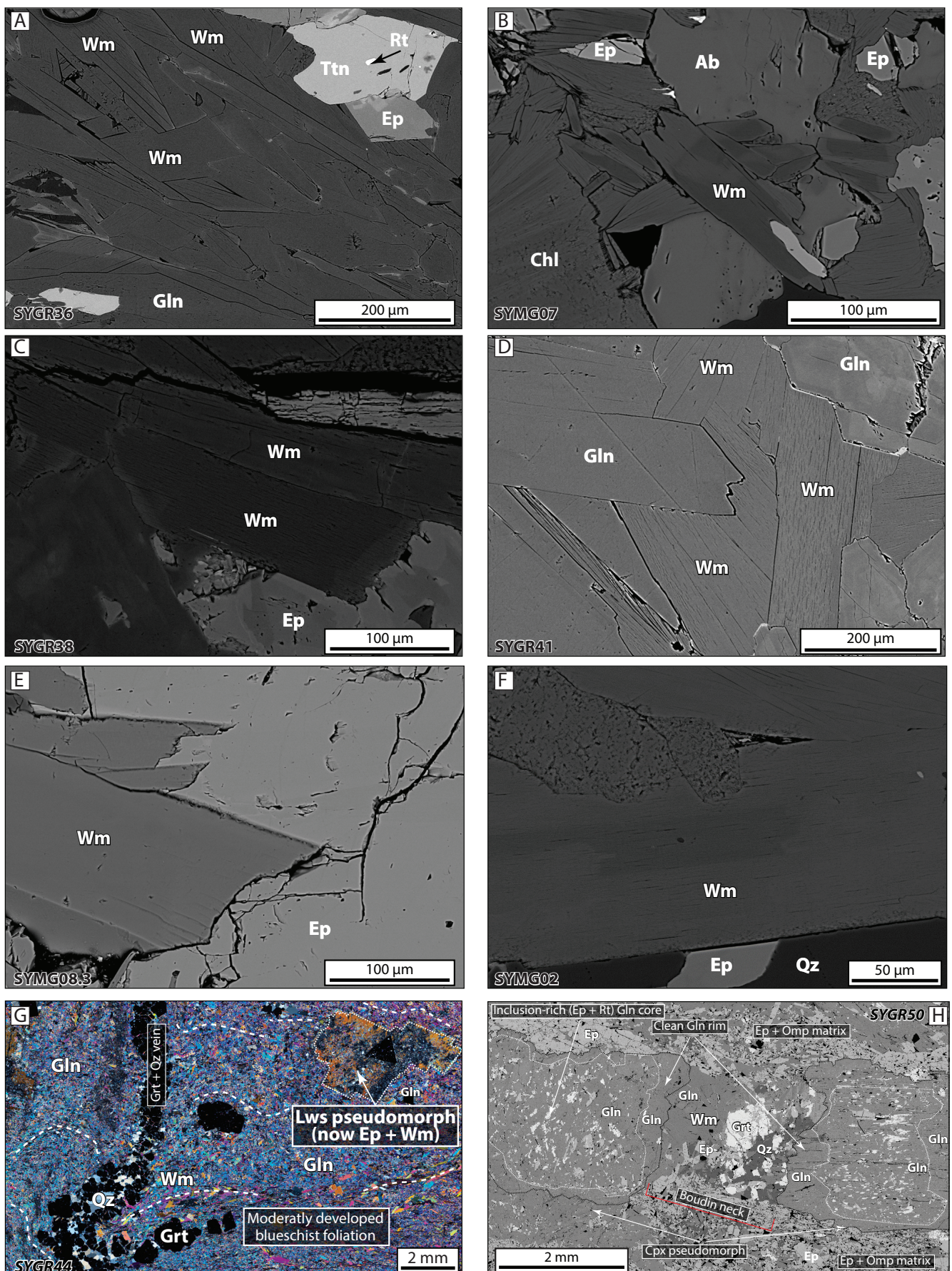
Supplementary Figure S1. Weighted means of epidote $^{87}\text{Sr}/^{86}\text{Sr}$ from Grizzas (North East Syros Island, SYGR, a-d) and Megas Gialos (South Syros Island, SYMG, e-g). Plots were generated using IsoplotR (Vermeesch, 2018).



Supplementary Figure S2. Mica Rb-Sr isochrons for additional samples from Grizzas and Megas Gialos, where symbols and designations are equivalent to Figure 4. Plots were generated using IsoplotR (Vermeesch, 2018).



Supplementary Figure S3. Effect of modelled initial $^{87}\text{Sr}/^{86}\text{Sr}$ on the isochronous regressions for two representative samples (Grizzas, SYGR38, and Megas Gialos, SYMG08.3). The complete dataset exploring the age effect of employing different initial $^{87}\text{Sr}/^{86}\text{Sr}$ in the 0.703-0.710 range is reported in **Supplementary Table S5**.



Supplementary Figure S4. A to F. high-contrast BSE images highlighting (the lack of) chemical zoning patterns in white mica, as well as various white mica occurrences. G. Photomicrographs (crossed polars) of the blueschist block sample SYGR44 highlighting epidote replacing lawsonite in pseudomorphic texture, which corresponds to the analyzed microdomain for *in situ* $^{87}\text{Sr}/^{86}\text{Sr}$ determinations. H. BSE image of the weakly strained metagabbro sample SYGR50 highlighting epidote in the foliated matrix around porphyroclasts and within boudin necks, which represent the targeted microstructures for *in situ* $^{87}\text{Sr}/^{86}\text{Sr}$ analyses.