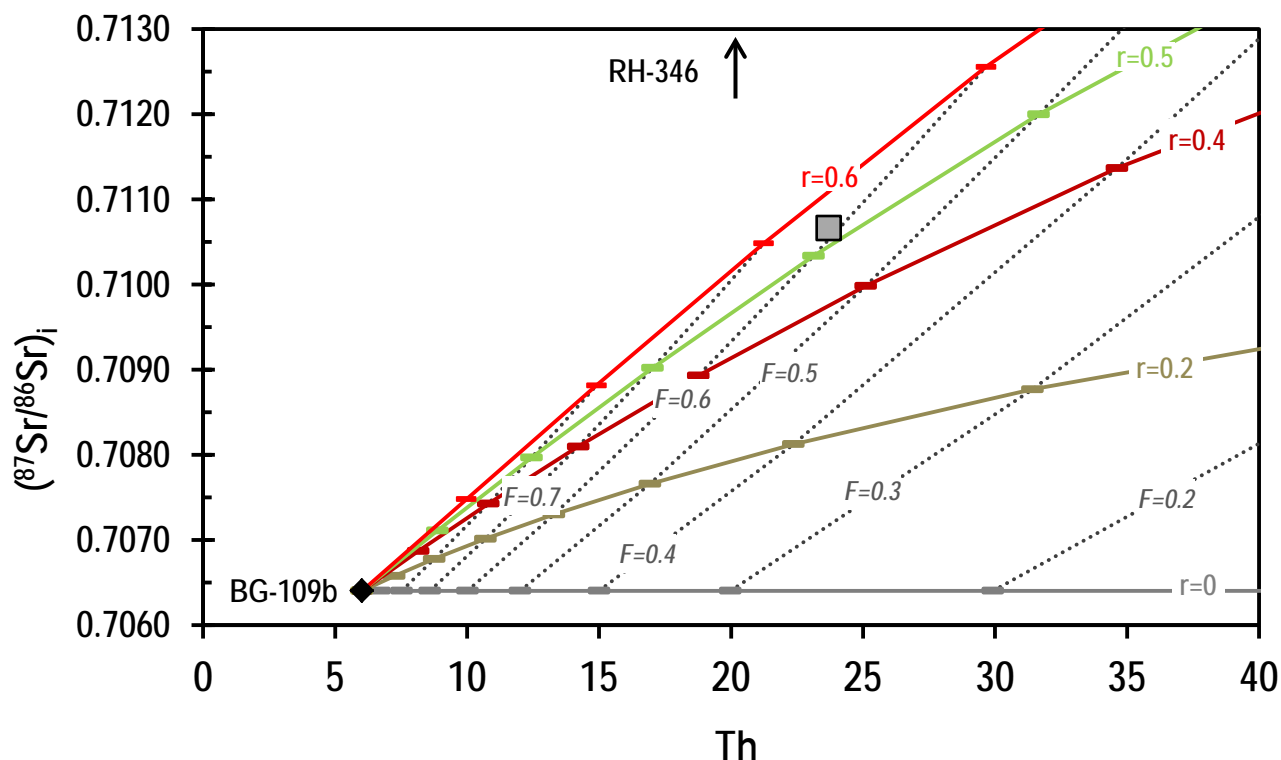


Supplementary figure S5. Assimilation and fractional crystallization (AFC) models



Assimilation and fractional crystallization (AFC) models using equations of De Paolo (1981) for the Stomanovo monzonite. Basic end-member is absarokite (sample Bg109b, Sr=366.9, Th=6.02, $^{87}\text{Sr}/^{86}\text{Sr}=0.70641$) from Kirchenbaur et al. (2012). The composition of the Carboniferous gneiss contaminant material (sample RH346, Sr=108.1, Th=19.73, $^{87}\text{Sr}/^{86}\text{Sr}=0.72820$) is taken from Cornelius (2008).

(r) is ratio of assimilated material to crystallized material. Marks on the AFC curves (F) represent the ratio of magma mass to original magma mass. Bulk partition coefficient used in the modeling are: $\text{DSr} = 1.2$, $\text{DTh} = 0.004$.

The AFC curves are plotted with AFC-Modeler (Keskin, 2013).

References:

- Cornelius, N. K. 2008. UHP metamorphic rocks of the Eastern Rhodope Massif, NE Greece: new constraints from petrology, geochemistry and zircon ages. PhD thesis. Mainz, Johannes Gutenberg University, 164 pp. <http://doi.org/10.25358/openscience-4327>
- Keskin, M. 2013. AFC-Modeler: a Microsoft® Excel® workbook program for modelling assimilation combined with fractional crystallization (AFC) process in magmatic systems by using equations of DePaolo (1981). Turkish Journal of Earth Sciences 22, 304–319.