Retinoic acid maintains human skeletal muscle progenitor cells in an immature state

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To determine the initial impact of BMS493 on myoblast differentiation, confluent human myoblasts were incubated with 10^{-7}M BMS493 or 0.1 % DMSO (vehicle; ctrl), induced to differentiate for 24 hours and then the number of MYOD and MYOGENIN positive cells was assessed by immunofluorescence (Fig. s1). BMS493 treatment increased the number of myogenin but not MYOD positive cells suggesting that enhanced repression activity of RAR receptor enhanced the number of myoblasts recruited into the differentiation process.

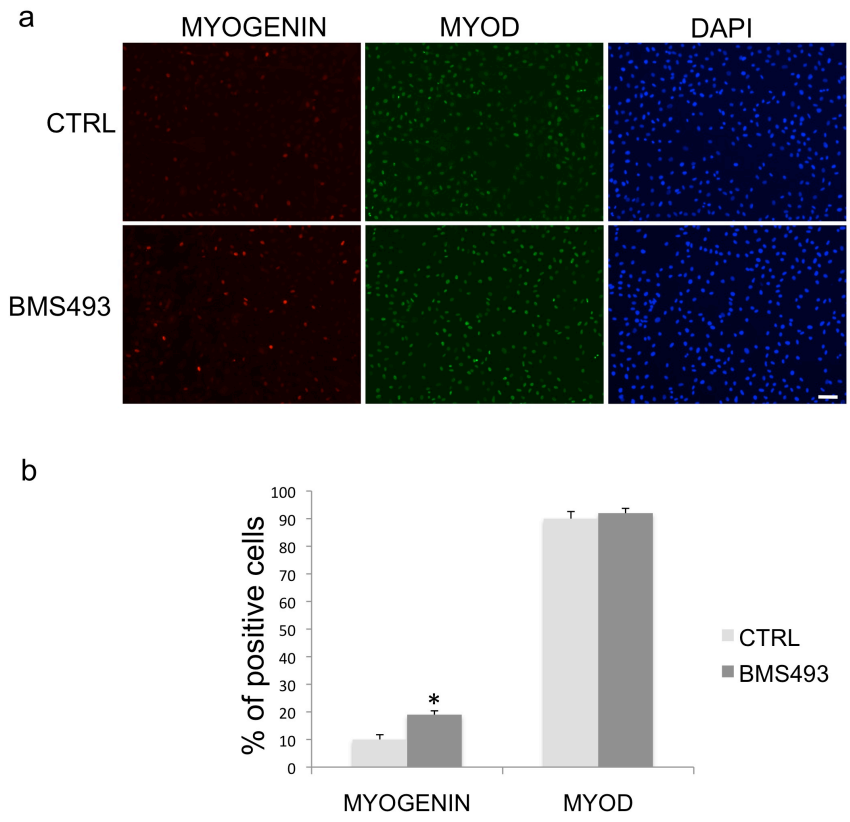

Fig. s1: BMS493 enhanced the number of MYOGENIN positive cells in human myoblasts.

(A) Images (six fields for each condition) showing immunofluorescence analysis of MYOGENIN (Red) and MYOD (green) expression in ctrl and BMS493 treated myoblasts for 24 hours. DNA was stained with DAPI (blue). (B) Quantification of the immunofluorescence data: percentage of MYOD and MYOGENIN-positive nuclei relative to all cell nuclei in human myoblasts treated (BMS493) or not (ctrl; 0.1% DMSO) for 24 hours. $P<0.05$ (*). Bar: 20 μM