



**SUPPLEMENTARY FIG. S2.** Behavioral abnormalities in MPS VI mice treated with either AAV.TBG.hARSB or rhARSB. Behavioral tests were performed 4–5 months postinjection on 5–6-month-old MPS VI mice treated with either AAV.TBG.hARSB (AAV.hARSB,  $n=4$ , light gray bar) or rhARSB ( $n=4$ , dark gray bar) and in age-matched normal (NR,  $n=13$  white bar) and affected (AF,  $n=9$  [except for rotarod task  $n=8$ ], black bar) controls. The mean latency to fall off the rod or the grid was measured in the rotarod (**a**) and the hanging wire (**b**) tasks, respectively. A 30 min open-field task was also performed in MPS VI treated and control mice (**c–e**). The track plot of the distance traveled in the first 5 min of the open-field task by mice of each experimental group is reported (**c**) and quantified as mean path length (**d**) and time spent in the central area (**e**). Results are represented as mean  $\pm$  SE. Statistical comparisons were made using the one-way analysis of variance and the Fisher LSD *post hoc* test. The  $p$ -value vs. NR is # $\leq 0.05$ , and vs. AF is \* $\leq 0.05$  and \*\* $\leq 0.01$ . The exact  $p$ -values obtained are indicated in the Materials and Methods section. The number ( $n$ ) of animals in each group is indicated under each bar.