

**Table S1.** Composition of groups of investigated mice (F2 generation).

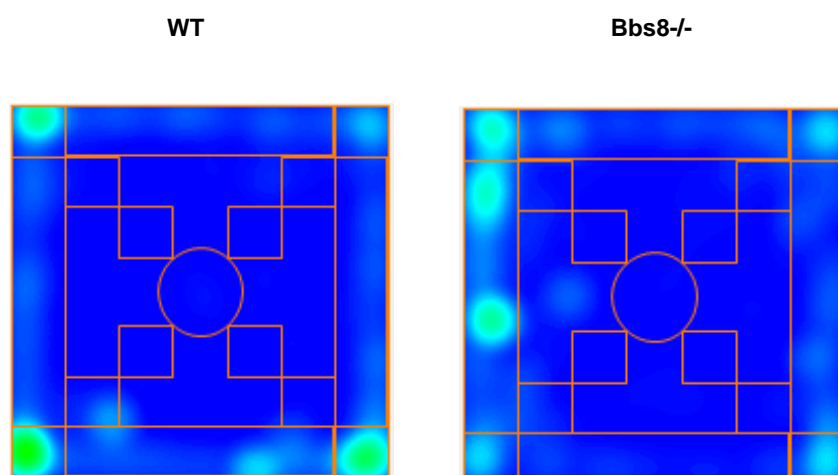
Male Bbs8 +/- mice were crossed with BALB/canNRj female mice. Offspring was genotyped for albinism caused by tyr gene mutation and for knockout of the Bbs8 gene.

Bbs8-genotype	Albino-genotype	$\text{tyr}^G/\text{tyr}^G$				$\text{tyr}^C/\text{tyr}^C$		$\text{tyr}^G/\text{tyr}^C$			
<b>(+/+)</b>	#animals	<b>6</b>				<b>5</b>		<b>11</b>			
	sex	♂		♀		♂	♀	♂		♀	
		3		3		3	2	5		6	
	fur color	brown	grey	brown	grey	white		brown	grey	brown	grey
			3	1	2	5		1	4	4	2
<b>(-/-)</b>	#animals	<b>6</b>				<b>5</b>		<b>11</b>			
	sex	♂		♀		♂	♀	♂		♀	
		4		2		2	3	5		6	
	fur color	brown	grey	brown	grey	white		brown	grey	brown	grey
		2	2	0	2	5		1	4	2	4

**Table S2.** Time course of behavioral tests

Animals were housed as groups of 4 up to end of week 2, then they were single-caged.

	Week 1	Week 2	Week 3	Week 4
<b>a.m.</b>	Tube test SI test	Marble burying test T Maze test	USV recording Urine scent marking test Olfaction test	Olfaction test Pasta gnawing test Nesting test
<b>p.m.</b>	Huddling test Neophobia test RAWM	Open field test NISO test Forced swim test	Pole test Nesting test	Pasta gnawing test



**Figure S1. Examples of heat maps for movement profile visualization.** A heat map reporting on the localization of an exemplary wild type and a Bbs knockout mouse is shown. The wild type animal stayed for longer periods in the corners, while the Bbs8 animal showed a more spread pattern of localization.