

**Table S2.** Donor engraftment (mean  $\pm$  standard deviation) among conventionally housed mice, as determined by SourceTracker. Values sharing the same letter did not differ significantly by Tukey's *post-hoc* test ( $P > 0.05$ ), where A had the highest engraftment and J the lowest. The final row shows all samples at all time points pooled by donor.

Sex	Time (days)	Obese			Lean		
		Ob1	Ob2	Ob3	Ln1	Ln2	Ln3
Male	3	80.4 $\pm$ 4.5 <sup>ABC</sup>	26.5 $\pm$ 6.0 <sup>F-J</sup>	80.3 $\pm$ 36.1 <sup>ABC</sup>	47.7 $\pm$ 2.4 <sup>C-H</sup>	53.2 $\pm$ 1.7 <sup>C-G</sup>	50.4 $\pm$ 39.9 <sup>C-G</sup>
	7	40.9 <sup>D-I</sup>	7.8 $\pm$ 6.8 <sup>IJ</sup>	43.4 $\pm$ 14.8 <sup>D-H</sup>	65.2 $\pm$ 9.7 <sup>A-E</sup>	41.0 $\pm$ 2.9 <sup>D-I</sup>	34.9 $\pm$ 31.7 <sup>E-J</sup>
	16	46.1 $\pm$ 9.7 <sup>C-H</sup>	NC	NC	68.4 $\pm$ 4.0 <sup>A-E</sup>	NC	NC
	27-32	37.4 $\pm$ 11.1 <sup>E-I</sup>	0.0 $\pm$ 0.0 <sup>J</sup>	13.0 $\pm$ 7.0 <sup>HIJ</sup>	37.3 $\pm$ 1.5 <sup>E-I</sup>	42.1 $\pm$ 7.7 <sup>D-I</sup>	23.6 $\pm$ 14.4 <sup>F-J</sup>
Female	3	46.4 $\pm$ 7.4 <sup>C-H</sup>	7.9 $\pm$ 5.9 <sup>IJ</sup>	95.3 $\pm$ 1.2 <sup>A</sup>	40.3 $\pm$ 6.0 <sup>E-I</sup>	42.5 $\pm$ 5.1 <sup>D-I</sup>	92.3 $\pm$ 0.8 <sup>AB</sup>
	7	58.6 $\pm$ 8.5 <sup>B-F</sup>	0.0 $\pm$ 0.0 <sup>J</sup>	75.5 $\pm$ 9.8 <sup>A-D</sup>	62.6 $\pm$ 6.0 <sup>A-E</sup>	43.6 $\pm$ 4.1 <sup>D-H</sup>	53.3 $\pm$ 6.8 <sup>C-G</sup>
	16	52.2 $\pm$ 3.1 <sup>C-G</sup>	NC	NC	53.2 $\pm$ 14.1 <sup>C-G</sup>	NC	NC
	27-32	21.1 $\pm$ 3.1 <sup>G-J</sup>	0.0 $\pm$ 0.0 <sup>J</sup>	45.4 $\pm$ 3.3 <sup>C-H</sup>	14.2 $\pm$ 1.6 <sup>HIJ</sup>	35.9 $\pm$ 3.5 <sup>E-H</sup>	39.5 $\pm$ 2.7 <sup>E-I</sup>
<b>All pooled by donor</b>		A	B	A	A	A	A

NC: sample not collected