

Tissue Section	CXCR4+ Cells		CXCR4- Cells	
	Mouse 1	Mouse 2	Mouse 3	Mouse 4
Tibialis Anterior (T)				
T1	150	102	21	28
T2	75	99	60	43
T3	125	120	45	24
T4	78	68	55	57
T5	88	96	48	33
Quadriceps (Q)				
Q1	235	220	48	53
Q2	330	265	63	36
Q3	123	145	88	44
Q4	323	235	62	27
Q5	145	120	92	42

Tissue Section	CXCR4+ Cells & Ab		Freshly Isolated SP Cells	
	Mouse 5	Mouse 6	Mouse 7	Mouse 8
Tibialis Anterior (T)				
T1	80	75	18	7
T2	34	43	20	15
T3	42	23	22	24
T4	42	42	8	26
T5	72	44	0	11
Quadriceps (Q)				
Q1	72	80	11	8
Q2	88	46	15	6
Q3	66	100	6	12
Q4	102	78	12	17
Q5	92	97	6	5

Supplemental Table 1. Number of eGFP-positive mononuclear cells in skeletal

muscle sections from mice transplanted with different fractions of eGFP-positive

donor cells. A significantly greater number of eGFP-positive mononuclear cells were

identified in tibialis anterior and quadriceps muscle sections from mice who were

transplanted with CXCR4-positive eGFP-positive SP-derived cultured cells than from

mice who received CXCR4-negative eGFP-positive SP-derived cultured cells ($p < 0.001$);

CXCR4-positive eGFP-positive SP-derived cultured cells pretreated with a CXCR4

blocking antibody ($p < 0.001$); and eGFP-positive freshly isolated SP cells ($p < 0.001$) by

one-tailed t-test. SP = side population. Ab = blocking antibody against CXCR4. T1-T5 =

sections from tibialis anterior muscle. Q1-Q5 = sections from quadriceps muscle. eGFP =

enhanced green fluorescent protein.

Supplemental Table 2. Percent Engraftment of eGFP-positive donor cells into *mdx*^{5cv} skeletal muscle 30 days after transplantation.

Tissue Section	CXCR4+ Cells			CXCR4- Cells		
	Mouse 1	Mouse 2	Mouse 3	Mouse 4	Mouse 5	Mouse 6
Tibialis Anterior (T)						
T1	0%	0%	0%	0%	0%	0%
T2	1.79%	0%	7.32%	0%	0%	0%
T3	0%	7.04%	0%	0%	0%	2.56%
T4	8.14%	4.17%	4.88%	0%	5.56%	0%
T5	3.08%	4.44%	6.25%	0%	0%	5.62%
T6	3.13%	0%	6.82%	0%	2.70%	0%
T7	1.12%	5.26%	0%	4.17%	3.37%	0%
T8	0%	0%	0%	2.67%	2.78%	4.35%
T9	0%	7.14%	0%	3.49%	0%	6.56%
T10	0%	0%	6.67%	1.45%	0%	0%
Quadriceps (Q)						
Q1	0%	0%	0%	0%	0%	0%
Q2	0.60%	7.59%	0%	2.22%	0%	0%
Q3	0%	0%	6.90%	1.99%	2.11%	0.50%
Q4	1.48%	0%	8.25%	2.48%	2.78%	0.50%
Q5	3.81%	7.07%	0.53%	3.70%	0.50%	2.78%
Q6	2.40%	7.76%	0%	0.34%	4.17%	4.52%
Q7	7.28%	0.45%	5.06%	0%	2.27%	2.13%
Q8	0%	5.67%	7.35%	0%	0%	0%
Q9	0%	0%	6.20%	0%	0%	3.57%
Q10	0%	0%	0%	0%	0%	3.28%
Tissue Section	CXCR4+ Cells & Ab			Freshly Isolated SP Cells		
	Mouse 7	Mouse 8	Mouse 9	Mouse 10	Mouse 11	Mouse 12
Tibialis Anterior (T)						
T1	0%	0%	0%	0%	0%	0%
T2	0%	0%	0%	0%	0%	0%
T3	1.54%	0%	0%	0%	0%	0%
T4	7.14%	0%	4.41%	0%	0%	1.79%
T5	4.65%	5.88%	0%	0%	0%	0%
T6	5.06%	6.06%	0%	0%	0%	0%
T7	1.30%	0%	7.95%	0%	0%	0%
T8	1.16%	6.33%	11.11%	0%	0%	0%
T9	2.63%	7.32%	5.88%	0%	0%	0%
T10	0%	0%	7.55%	0%	0%	0%
Quadriceps (Q)						
Q1	0%	0.65%	0%	0%	0%	0%
Q2	0%	7.79%	0.61%	0%	0%	0%
Q3	6.84%	7.39%	0%	0%	0%	0%
Q4	2.78%	0%	6.00%	0%	0%	0.52%
Q5	2.18%	0%	6.45%	0%	0%	0%
Q6	1.67%	0.45%	0%	0%	0%	0%
Q7	0%	5.79%	0.56%	0.36%	0%	0%
Q8	0%	0.57%	7.59%	0%	0%	0%
Q9	0.49%	0%	6.77%	0%	0%	0%
Q10	0%	0%	0%	0%	0%	0%

Supplemental Table 2. Percent Engraftment of eGFP-positive donor cells into *mdx*^{5cv} skeletal muscle 30 days after transplantation. Percentages equal number of eGFP muscle fibers in one section divided by total number of muscle fibers in that section. Statistical analyses (one-tailed t-test) comparing non-zero values above shows that mice that received CXCR4-positive eGFP-positive SP-derived cultured cells had significantly more eGFP-positive fibers than mice who received CXCR4-negative eGFP-positive SP-derived cultured cells (Quadriceps: p=0.001; Tibialis Anterior: p=0.04) and eGFP-positive freshly isolated SP cells (Quadriceps and Tibialis Anterior: p<0.001) in sections in which engraftment was documented. No significant difference in engraftment rates identified between mice that received CXCR4-positive eGFP-positive SP-derived cultured cells and CXCR4-positive eGFP-positive SP-derived cultured cells pretreated with CXCR4 blocking antibody (Quadriceps: p=0.13; Tibialis Anterior: p=0.41). SP = side population. Ab = blocking antibody against CXCR4. T1-T10 = sections from tibialis anterior muscle. Q1-Q10 = sections from quadriceps muscle. eGFP = enhanced green fluorescent protein.