

	N-glycan structure	Mass (m/z)	C2C12-sh-Mock			C2C12-sh-C12			
			Prolife- ration	Differentiation		Prolife- ration	Differentiation		
				120 h MT	120 h RC+MB		120 h MT	120 h RC+MB	
Oligomannosylated glycans		1579	242.81	29.61	167.45	122.99	31.13	235.65	
		1783	156.52	28.87	176.23	151.42	39.41	403.92	
		1988	94.02	9.29	83.7	70.74	11.3	166.76	
		2192	91.95	10.91	103.91	76.65	14.09	202.85	
		2395	87.63	9.67	104.44	51.92	0	184.71	
Complex glycans	Neu- tral		2519	75.76	0	65.33	55.6	0	90.84
	Fucosylated		2693	76.43	0	82.69	64.64	0	111
			2839	83.39	0	79.01	0	0	0
	Sialylated		2792	336.4	610.85	278.92	215.85	303.82	249.27
			3037	0	55.44	0	27.59	0	0
			3242	100.45	169.24	69.61	71.57	74.16	51.52
			3604	494.64	331.88	377.62	345.26	337.53	237.58
			3966	127.83	82.05	151.39	73.98	72.61	68.86
	Fucosylated and sialylated		2605	122.38	81.2	122.77	65.15	83.33	189.2
			3053	0	0	23.88	0	0	28.86
			2966	62.09	40.63	59.75	36.86	45.15	115.85
			2778	168.63	230	146.32	95.73	142.85	92.14
			2822	85.47	167.58	64.68	57.09	98.99	0
			3023	0	50.52	44.73	0	0	0
			3228	49.62	68.8	136.62	27.94	37.31	46.75
Total			2456.02	1976.54	2339.05	1610.98	1291.68	2475.76	

Figure S4

Structures of *N*-glycans identified by MS/MS spectrometry. The identified glycans are classified according to their structure (oligomannose or complex) and their glycosylation state (fucosylated and/or sialylated). Each peak area is specified for C2C12-sh-Mock and C2C12-sh-C12 cells in proliferation (P) and in myotubes (MT) or in the mix of reserve cells (RC) and myoblasts (MB).