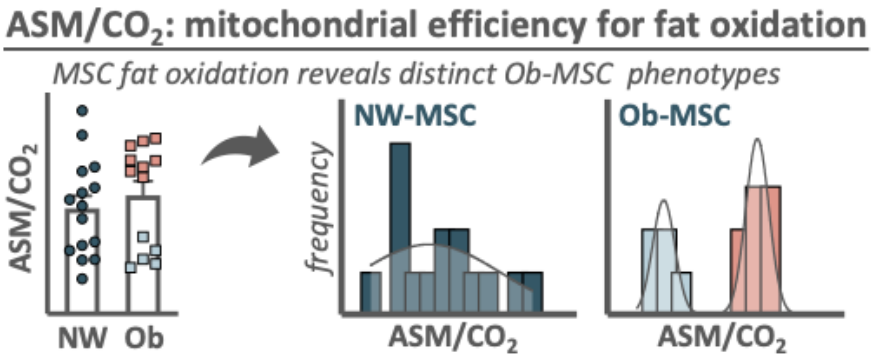
Supplemental Table 1. ProteinSimple WES Antibody and Assay Conditions

Antibody	Manufacturer	Cat. No.	Ab Dilution	Sample [protein]
β-Actin	Cell Signaling Technology	4970	1:50	0.2 μg/μL
PPARγ	Cell Signaling Technology	2435	1:25	0.8 μg/μL
SREBP1	Novus Biologicals	NB100-2215	1:25	0.2 μg/μL
FAS	Cell Signaling Technology	3180	1:500	0.2 μg/μL
SCD1	R&D Systems	AF7550	10 μg/mL	0.2 μg/μL
DGAT1	Novus Biologicals	NB100-57086	1:50	0.4 μg/μL
ACS	Cell Signaling Technology	3658	1:200	0.2 μg/μL

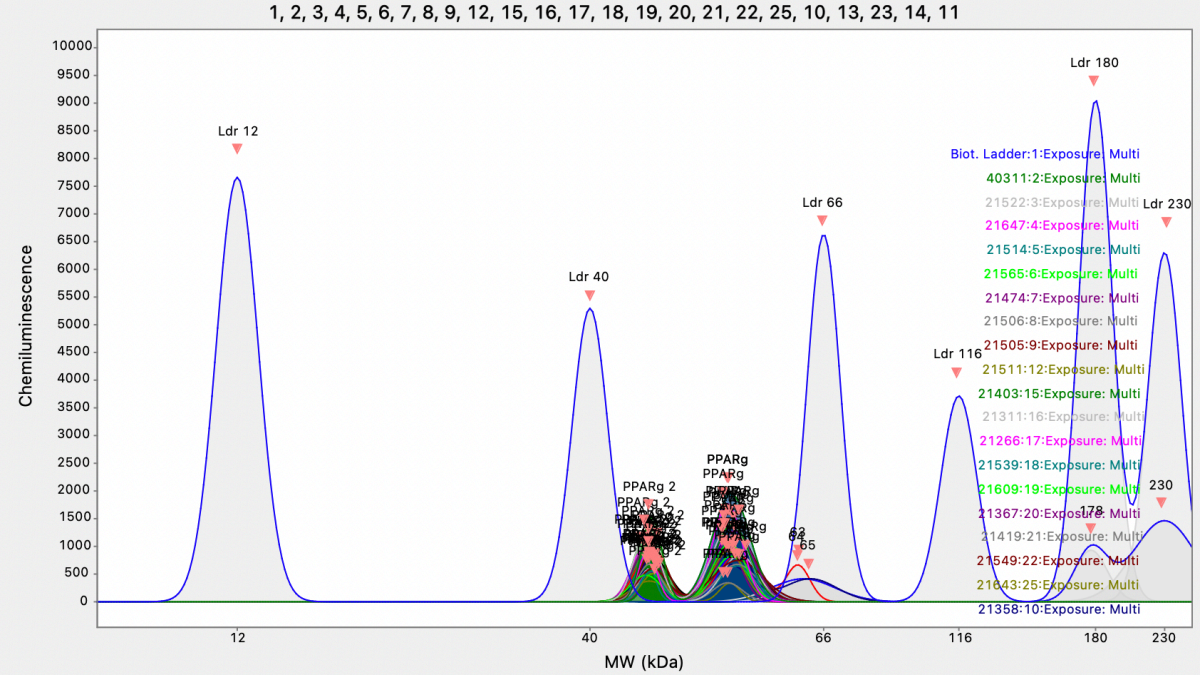
SUPPLEMENTARY FIGURE 1:



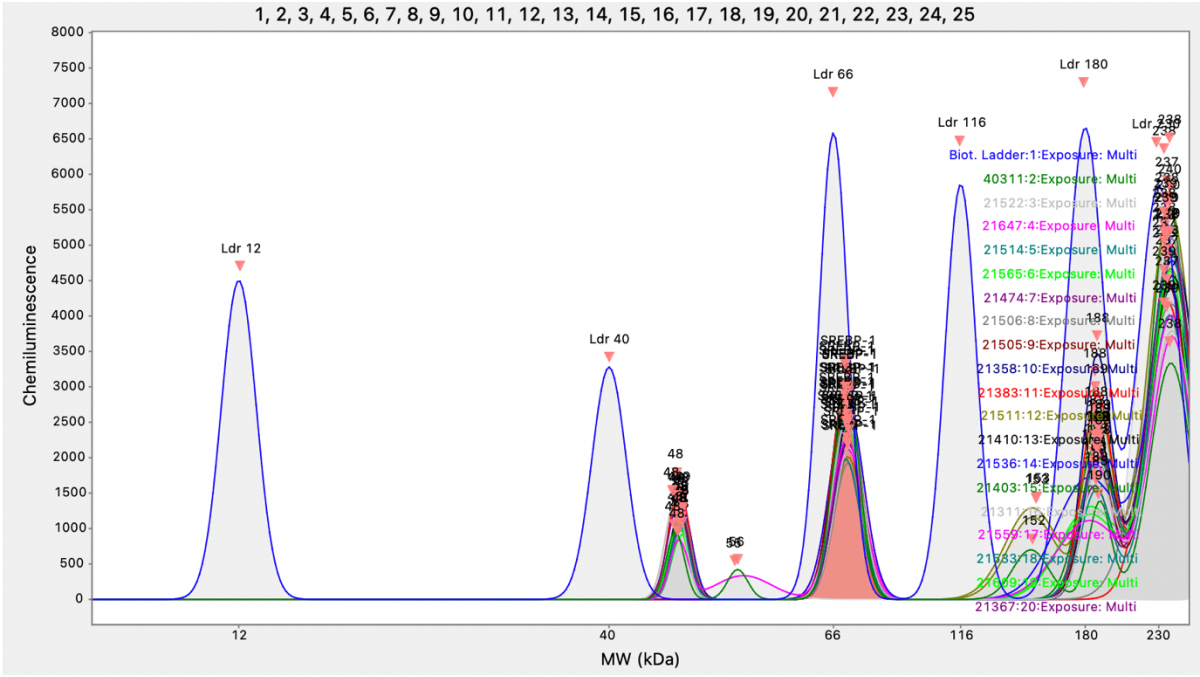
Previously reported MSC metabolism distinguishing Ob-MSC groups (11). Reprinted from *Molecular Metabolism*, 6(11), Kristen E. Boyle, Zachary W. Patinkin, Allison L.B. Shapiro, Carly Bader, Lauren Vanderlinden, Katerina Kechris, Rachel C. Janssen, Rebecca J. Ford, Brennan K. Smith, Gregory R. Steinberg, Elizabeth J. Davidson, Ivana V. Yang, Dana Dabelea, and Jacob E. Friedman, Maternal obesity alters fatty acid oxidation, AMPK activity, and associated DNA methylation in mesenchymal stem cells from human infants, 1503–1516, Copyright (2017), with permission from Elsevier.

SUPPLEMENTARY FIGURE 2: ProteinSimple WES chemiluminescent protein measures

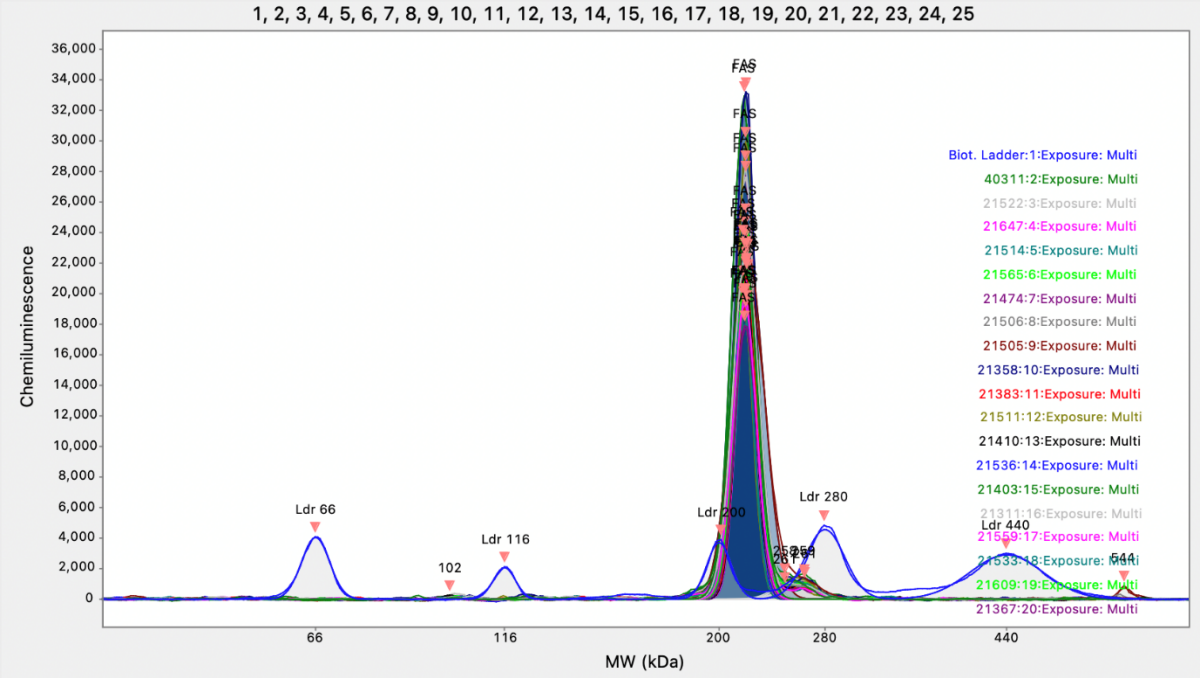
S2A. PPARγ



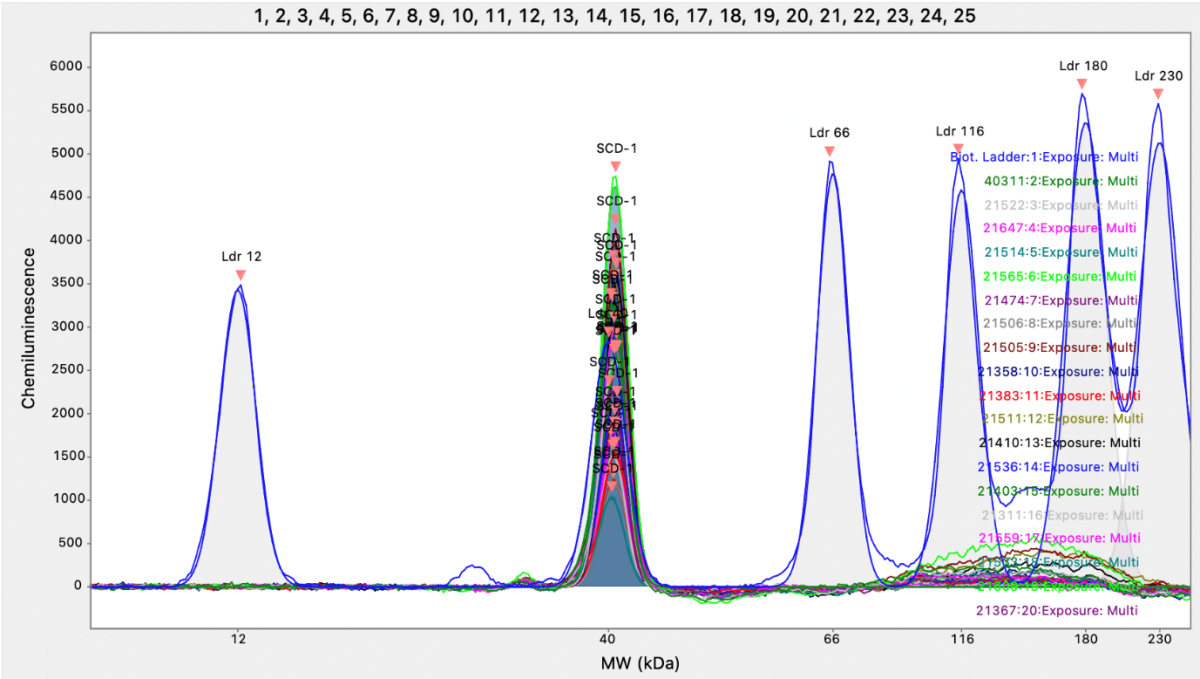
S2B. SREBP1



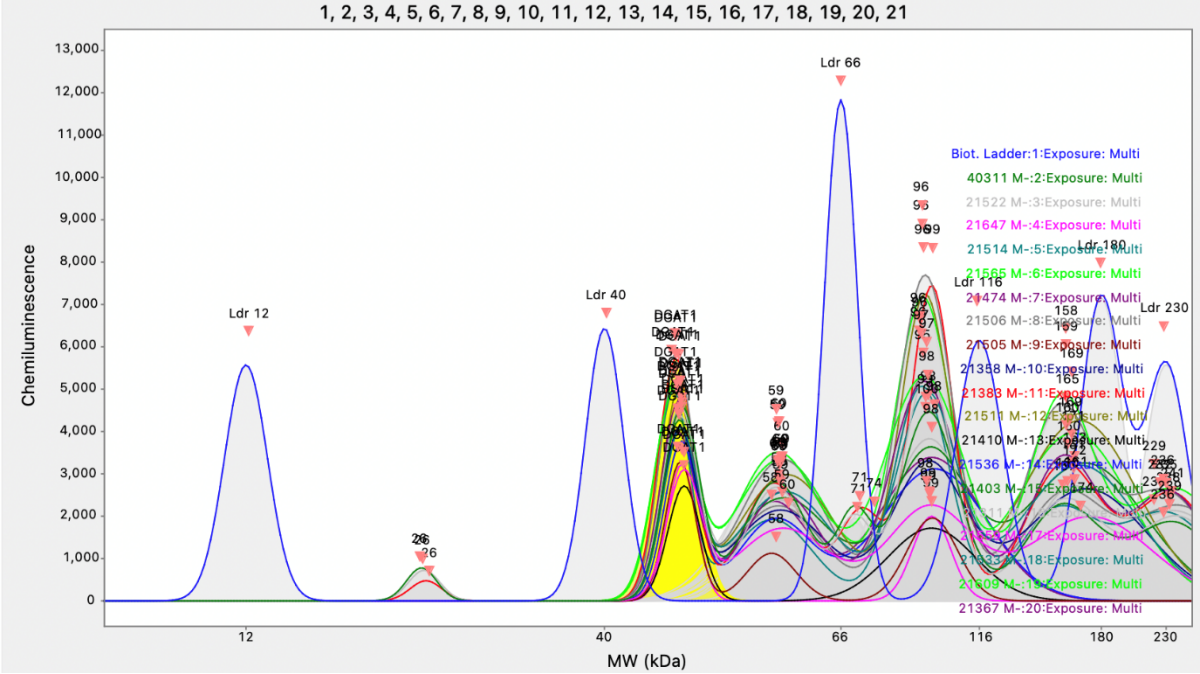
S2C. FAS



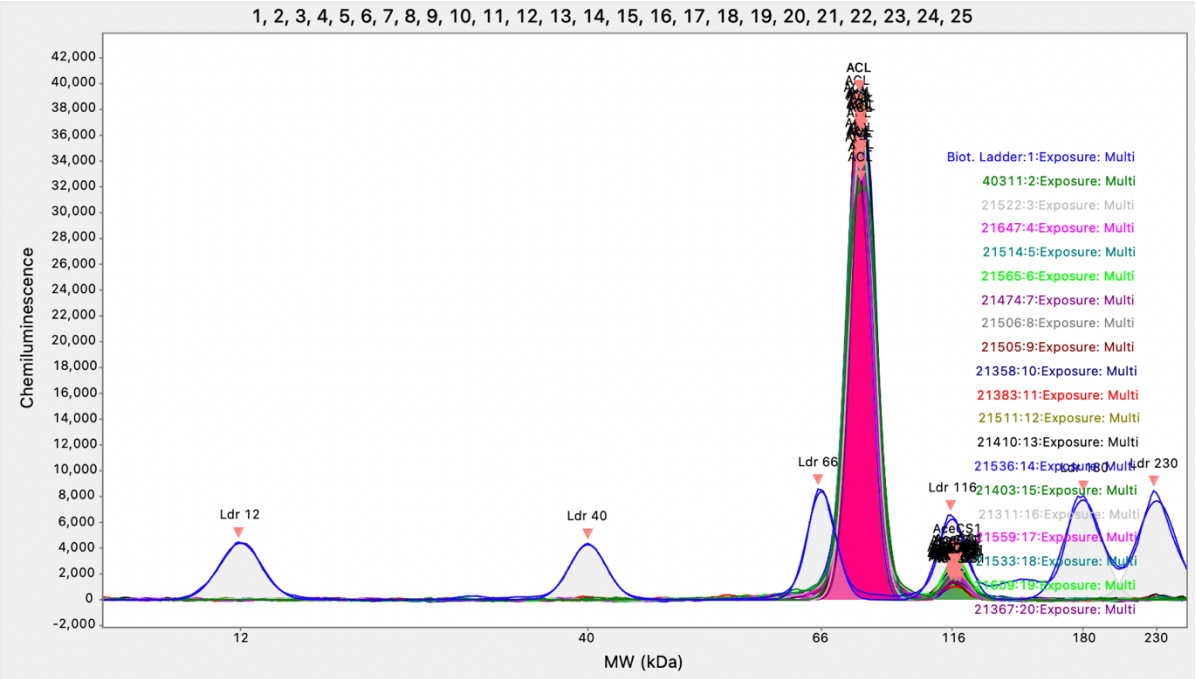
S2D. SCD-1



S2E. DGAT

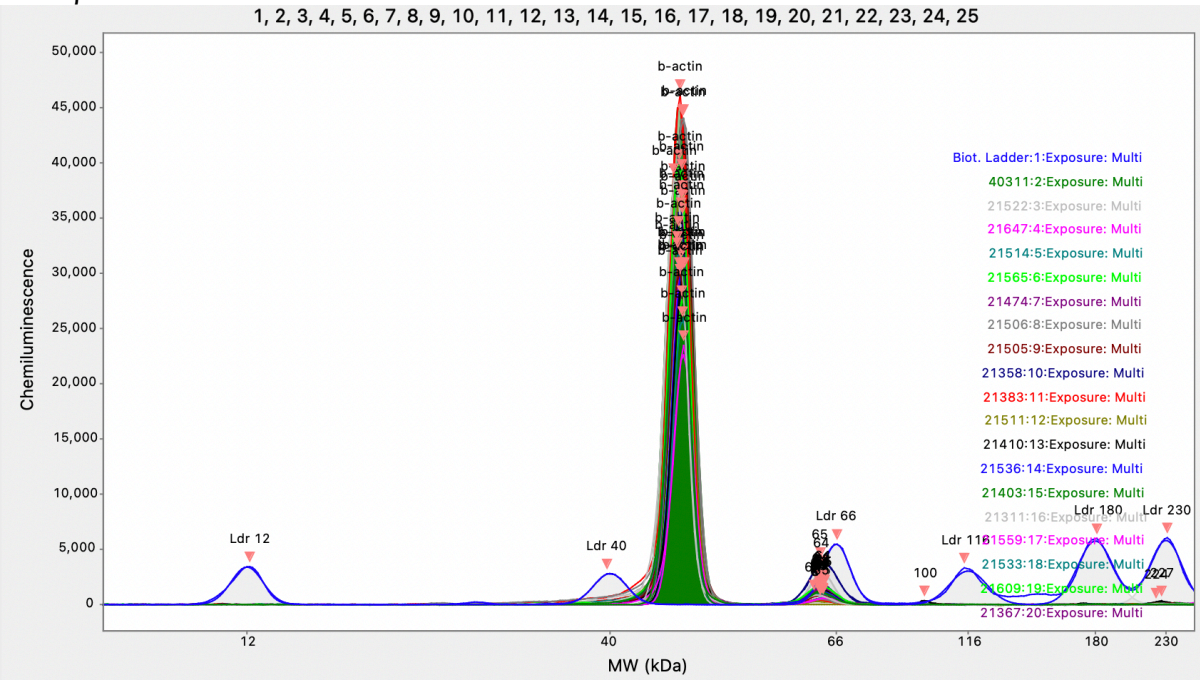


S2F. ACS

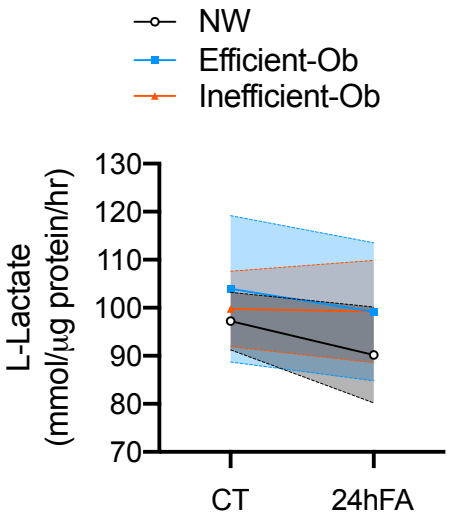


***Please note ACS (at MW ~118 kDa) was run multi-plexed with an additional protein at 81 KDa.*

S2G. β-actin

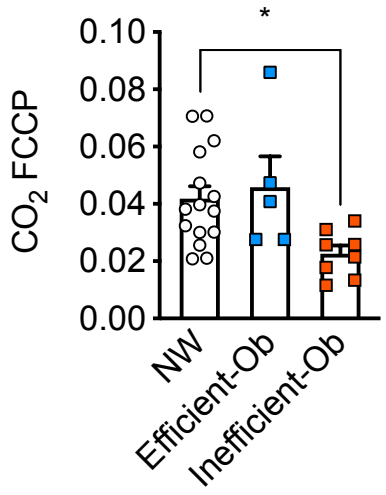

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25
Chemiluminescence
MW (kDa)
Ldr 12
Ldr 40
Ldr 66
Ldr 116
Ldr 180
Ldr 230
b-actin
Biot. Ladder:1:Exposure: Multi
40311:2:Exposure: Multi
21522:3:Exposure: Multi
21647:4:Exposure: Multi
21514:5:Exposure: Multi
21565:6:Exposure: Multi
21474:7:Exposure: Multi
21506:8:Exposure: Multi
21505:9:Exposure: Multi
21358:10:Exposure: Multi
21383:11:Exposure: Multi
21511:12:Exposure: Multi
21410:13:Exposure: Multi
21536:14:Exposure: Multi
21403:15:Exposure: Multi
21559:17:Exposure: Multi
21533:18:Exposure: Multi
21609:19:Exposure: Multi
21367:20:Exposure: Multi

SUPPLEMENTARY FIGURE 3:



Lactate concentrations in media, an index of glycolysis, were not different across NW, Ef-Ob, and In-Ob MSCs. Mixed model analysis of glycolysis among MSC metabolic phenotypes during two experimental conditions: control and 24hFA exposure (Interaction: F=0.116; *P*=0.891; Condition: F=0.510, *P*=0.483; Phenotype: F=0.238; *P*=0.790).

SUPPLEMENTARY FIGURE 4:



One-way ANOVA indicates significant between group effects (F=4.486, *P*=0.022). Sidak-adjusted post-hoc comparisons reveal Inefficient-Ob is significantly reduced compared to normal weight (*P*=0.038) indicated by a and b symbols. Data are presented as means ± SE. * indicates difference between NW and In-Ob ($P \leq 0.05$).