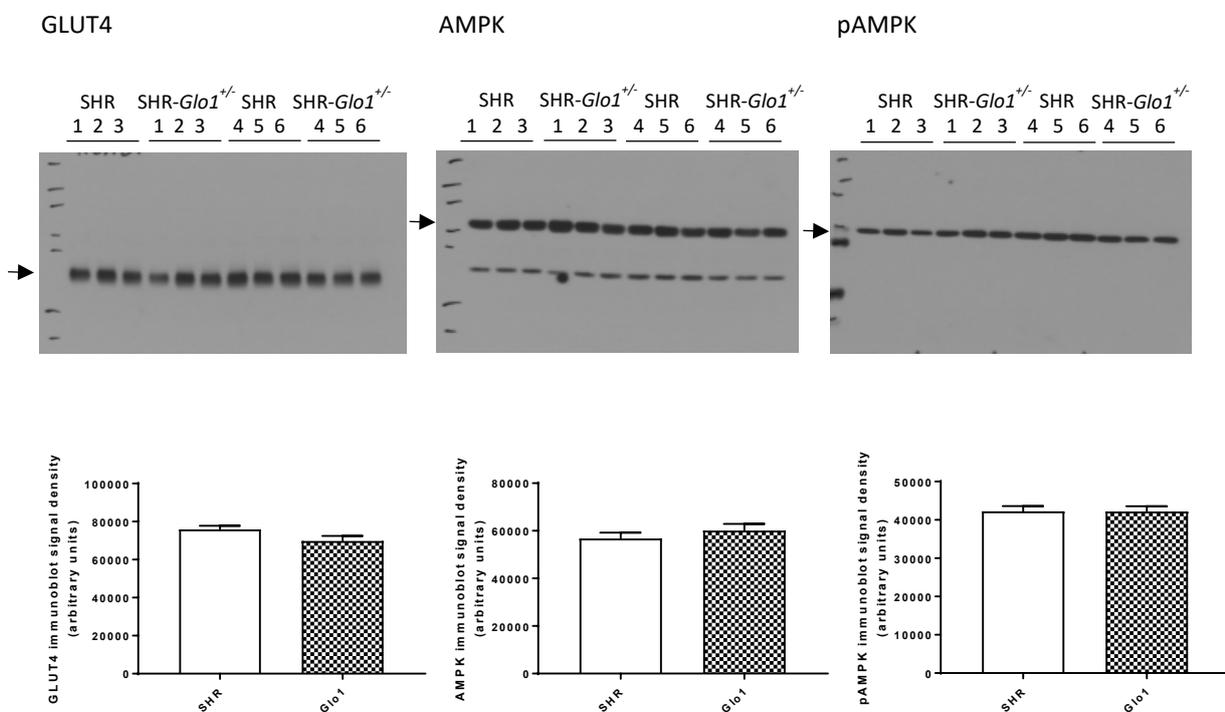


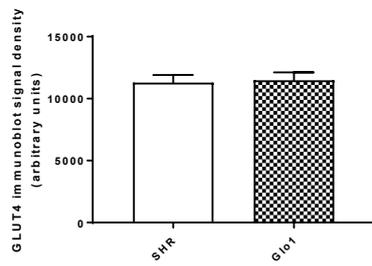
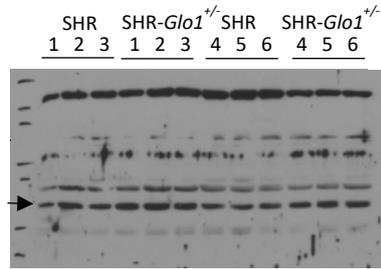
Supplementary Figure S1. Western blot analysis of PNS from the left ventricles (A), liver (B) and white adipose tissue (C) obtained from SHR and SHR-Glo1^{+/-} rats. After SDS-PAGE (10 mg of total protein per lane), the proteins were visualized with GLUT4, AMPK and pAMPK antibodies as described in Materials and Methods. Typical immunoblots are shown (at the top). The relative proteins levels (mean ± S.E.M.) determined in 3 separate experiments using individual samples from 6 animals in each group are plotted in arbitrary units (a.u.). Results were compared by one-way ANOVA followed by Bonferonni's post hoc test.

A – Heart tissue samples

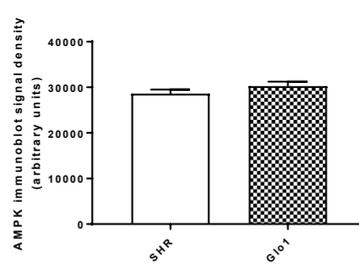
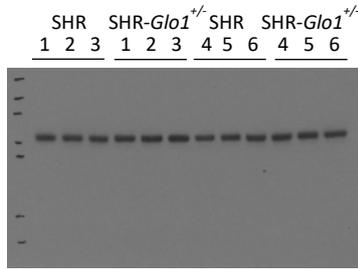


B – Liver tissue samples

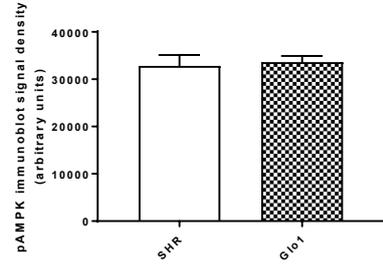
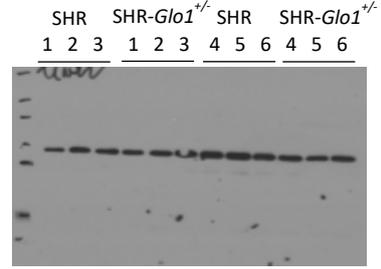
GLUT4



AMPK

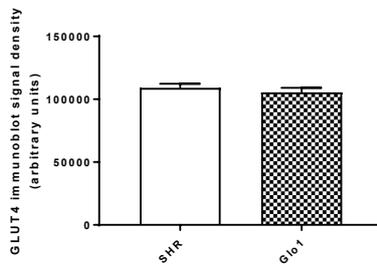
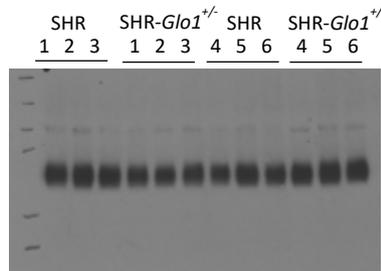


pAMPK

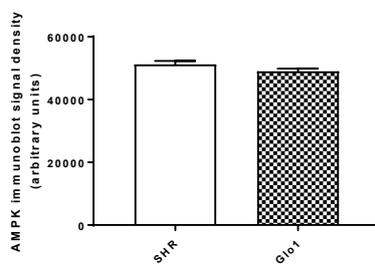
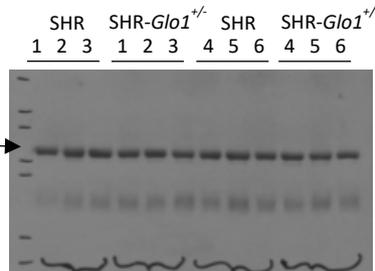


C – Fat tissue samples

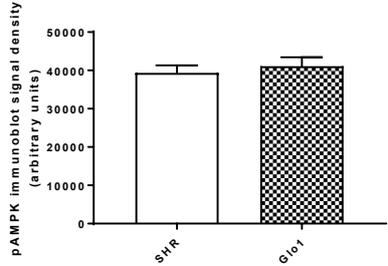
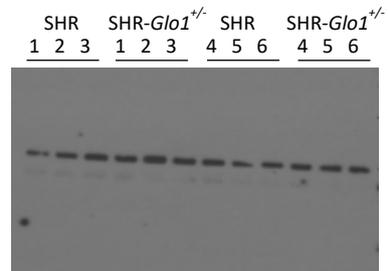
GLUT4



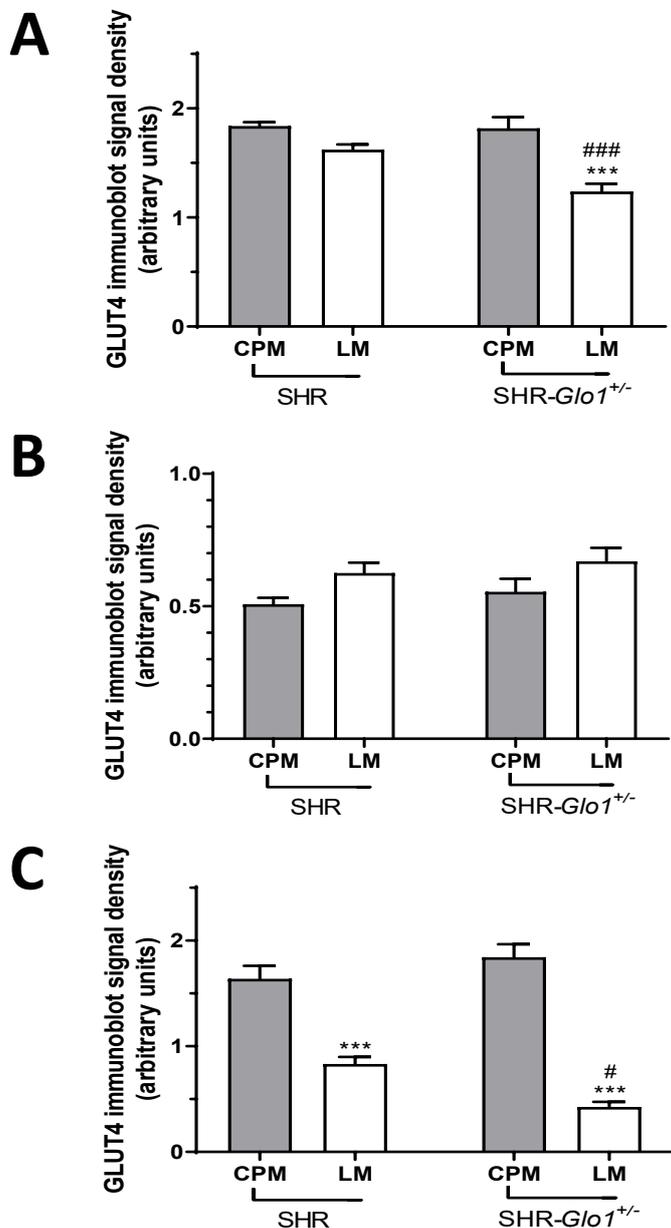
AMPK



pAMPK



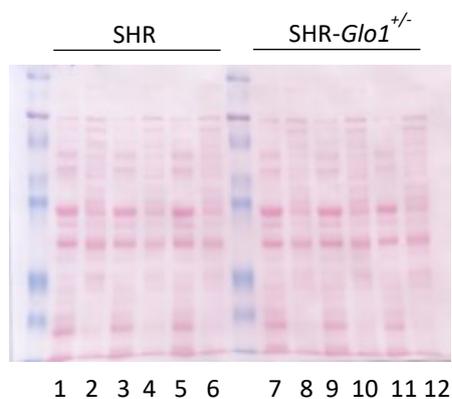
Supplementary Figure S2. Effect of *Glo1* downregulation on GLUT4 expression level in crude plasma membranes (CPM) and light microsomal membranes (LM) prepared by fractionation of the left ventricles (A), liver (B) and white fat tissue (C) from SHR and SHR-*Glo1*^{1+/-} rats. Equal sample volumes were subjected to electrophoresis and immunoblotted with antibodies against GLUT4 as described in Materials and Methods. The relative GLUT4 levels (mean \pm S.E.M.) determined in 3 separate experiments using individual samples from 6 animals in each group are plotted in arbitrary units (a.u.). Protein expression levels in CPM and LM in samples from SHR and SHR-*Glo1*^{1+/-} rats were compared by one-way ANOVA followed by Bonferroni's post-hoc test (***, $p < 0.001$ vs CPM; #, $p < 0.05$; ### $p < 0.001$ vs SHR).



Supplementary Figure S3. Monitoring of equal loading and transfer efficiency by Ponceau S total protein staining. Samples of CPM and LM (10 μ l per lane) prepared by fractionation of the left ventricles (A), liver (B) and white adipose tissue (C) from SHR and SHR-Glo1^{+/-} rats were subjected to SDS-PAGE and electrotransferred onto nitrocellulose membranes. After washing in water (three times for 5 min), the membranes were stained for 1 min with Ponceau S stain solution and then briefly destained with several changes of water (about 30 sec each). Subsequently, a permanent record of the staining pattern was made by photocopying the blots. Optical density of protein bands in each lane was determined by using densitometric software (ImageJ). The total amount of protein in each lane (corresponding to individual samples) was used to normalize the abundance of the protein of interest. Nevertheless, there were no significant differences between the results obtained before and after normalization. Densitometric analysis of Ponceau S-stained blots indicated that there were no significant differences between loading of respective samples. Optical densities of the total protein load in the individual lanes as well as average optical densities (\pm S.E.M.) of the total protein load in the corresponding samples are shown in tables next to the respective images.

A – Heart tissue samples

GLUT4

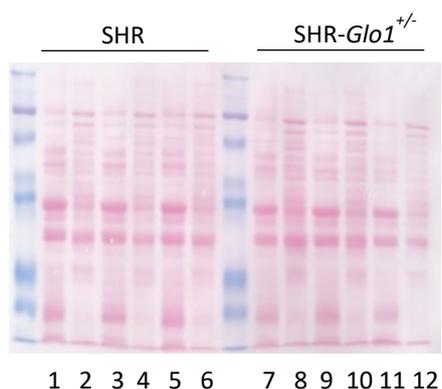


Sample number	Optical density
1	39832.58
2	36556.57
3	40024.73
4	38664.54
5	43495.2
6	36460.08
7	43957.37
8	35228.25
9	46315.56
10	37269.81
11	43932.2
12	38761.13

Average optical density

	SHR	SHR- <i>Glo1</i> ^{+/-}
CPM	41117.50 ± 1683.11	44735.04 ± 1117.64
LM	37200.40 ± 1017.21	37086.40 ± 1448.11

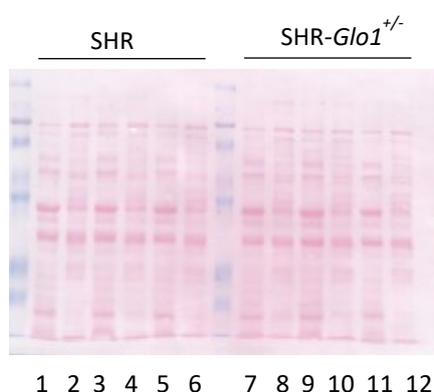
AMPK



Sample number	Optical density
1	59436.62
2	47612.01
3	58626.86
4	46547.47
5	59136.17
6	47311.15
7	55820.84
8	60995.8
9	62114.62
10	49148.01
11	59006.92
12	41132.41

	SHR	SHR- <i>Glo1</i> ^{+/-}
CPM	59066.55 ± 334.23	58980.79 ± 2569.49
LM	47156.88 ± 448.08	50425.41 ± 8159.35

pAMPK



Sample number	Optical density
1	40318.06
2	35862.06
3	42801.22
4	37442.76
5	43881.32
6	36638.42
7	49631.96
8	35198.47
9	49474.39
10	37580.59
11	40105.35
12	33297.01

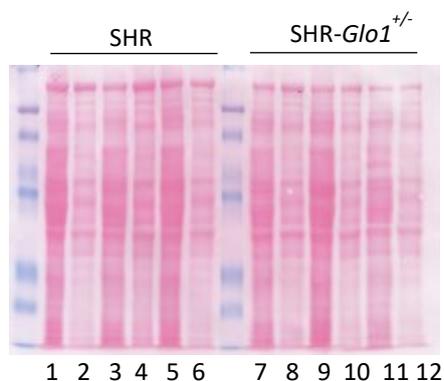
	SHR	SHR- <i>Glo1</i> ^{+/-}
CPM	42333.53 ± 1491.81	46403.90 ± 4454.21
LM	36647.75 ± 645.35	35358.69 ± 1752.43

1, 3, 5, 7, 9, 11 – CPM

2, 4, 6, 8, 10, 12 – LM

B – Liver tissue samples

GLUT4

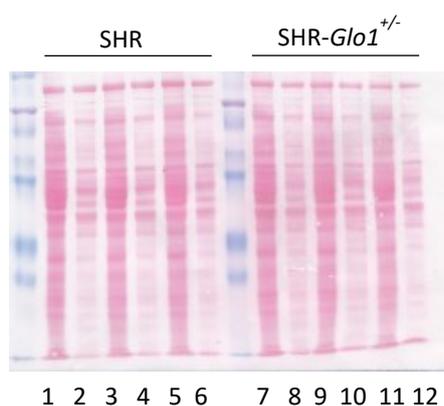


Sample number	Optical density
1	76592.74
2	43018.62
3	78757.18
4	52367.33
5	75669.31
6	57546.91
7	76100.96
8	59929.59
9	84030.4
10	48809.43
11	60580.11
12	35641.99

Average optical density

	SHR	SHR-Glo1 ^{+/-}
CPM	77006.41 ± 1294.11	73570.49 ± 9739.32
LM	50977.62 ± 6012.00	48127.00 ± 9927.11

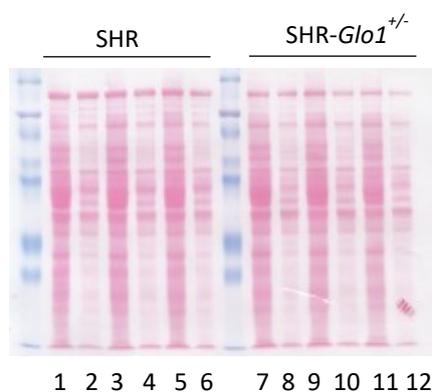
AMPK



Sample number	Optical density
1	87457.33
2	41435.11
3	83166.75
4	44101.94
5	85499.57
6	43014.31
7	87531.8
8	42692.94
9	85563.85
10	48627.21
11	84276.68
12	43273.73

	SHR	SHR-Glo1 ^{+/-}
CPM	85374.55 ± 1753.85	85790.78 ± 1338.55
LM	42850.45 ± 1094.88	44864.53 ± 2671.09

pAMPK



Sample number	Optical density
1	80645.93
2	40790.32
3	84377.75
4	43626.1
5	84883.17
6	43847.51
7	88459.95
8	45441.2
9	86759.53
10	45425.15
11	80289.02
12	37531.03

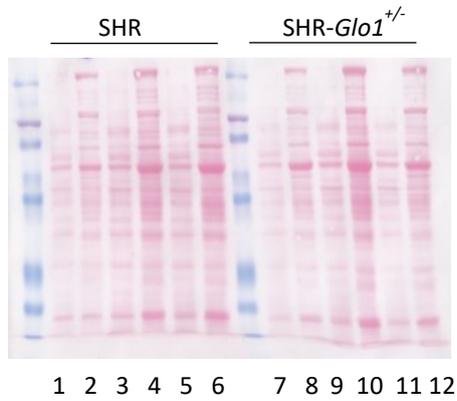
	SHR	SHR-Glo1 ^{+/-}
CPM	83302.28 ± 1889.63	85169.50 ± 1391.92
LM	42754.64 ± 3520.15	42799.13 ± 3725.11

1, 3, 5, 7, 9, 11 – CPM

2, 4, 6, 8, 10, 12 – LM

C – Fat tissue samples

GLUT4

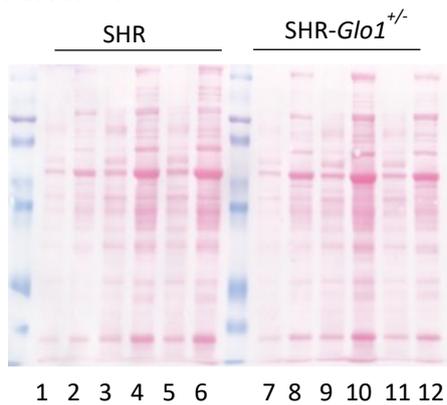


Sample number	Optical density
1	35435.31
2	48037.37
3	51571.15
4	90712.49
5	53397.81
6	92476.97
7	32427.83
8	59656.69
9	52540.44
10	100929.8
11	32792.43
12	69967

Average optical density

	SHR	SHR- <i>Glo1</i> ^{+/-}
CPM	46801.42 ± 8071.58	39253.57 ± 9396.42
LM	77075.61 ± 20545.77	76851.16 ± 17538.74

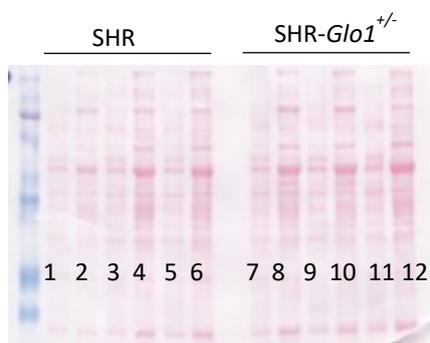
AMPK



Sample number	Optical density
1	27723.14
2	33036.83
3	41416.85
4	65096
5	41029.09
6	68398.71
7	26996.87
8	38459.8
9	42031.19
10	79164.37
11	36236.36
12	50023.5

	SHR	SHR- <i>Glo1</i> ^{+/-}
CPM	36723.03 ± 6365.85	35088.14 ± 6191.20
LM	55510.51 ± 15948.39	55882.56 ± 17126.23

pAMPK



Sample number	Optical density
1	25574.77
2	30031.09
3	26615.26
4	46363.46
5	27456.55
6	48458.15
7	27547.99
8	46127.34
9	29298.35
10	46069.34
11	34274.15
12	55316.29

	SHR	SHR- <i>Glo1</i> ^{+/-}
CPM	26548.86 ± 769.67	30373.50 ± 2849.24
LM	41617.57 ± 8237.39	49170.99 ± 4345.45

1, 3, 5, 7, 9, 11 – CPM

2, 4, 6, 8, 10, 12 – LM

Supplementary Materials

Examples of original images of immunoblots

Abbreviations:

St, molecular weight standard; *CPM*, crude plasma membranes; *LM*, light microsomal membranes; PNS, postnuclear supernatant; WAT, white adipose tissue

Fig. 1 – Levels of Glo1 in PNS from heart, liver and WAT of SHR and SHR-*Glo1*^{+/-} rats

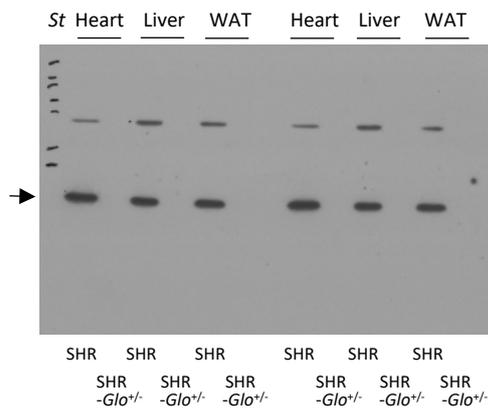


Fig. 2 – Markers of CPM and LM

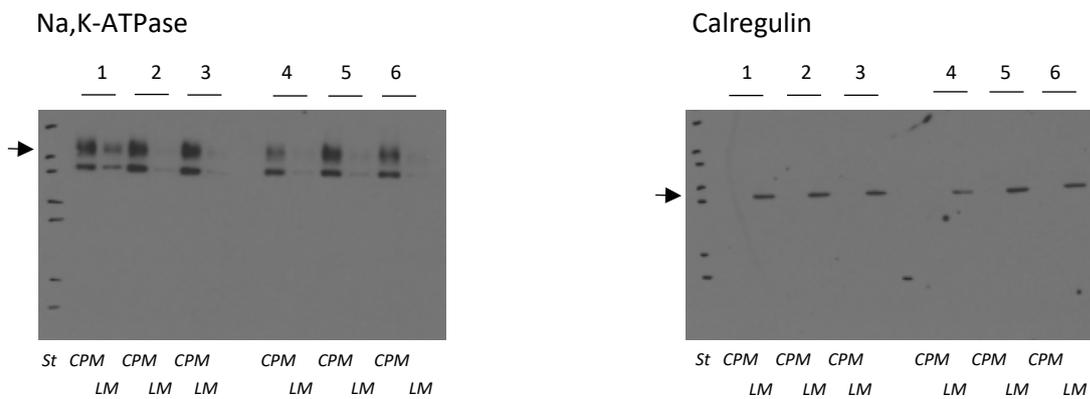
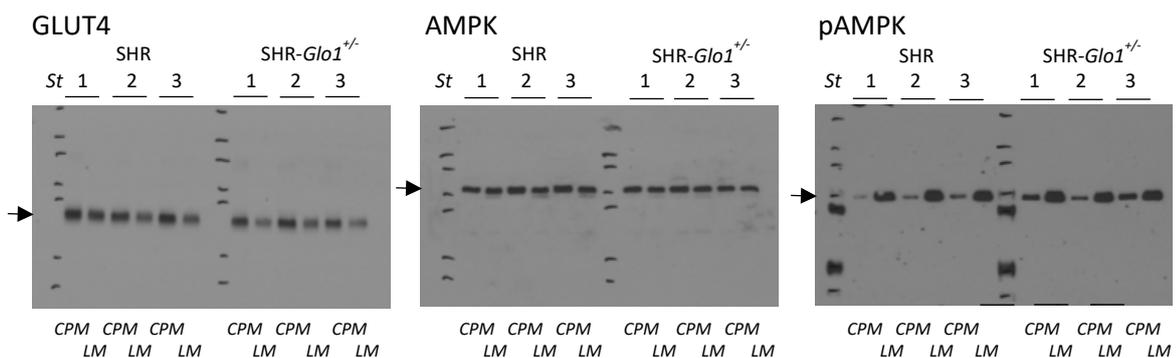


Fig. 3A – Heart tissue samples



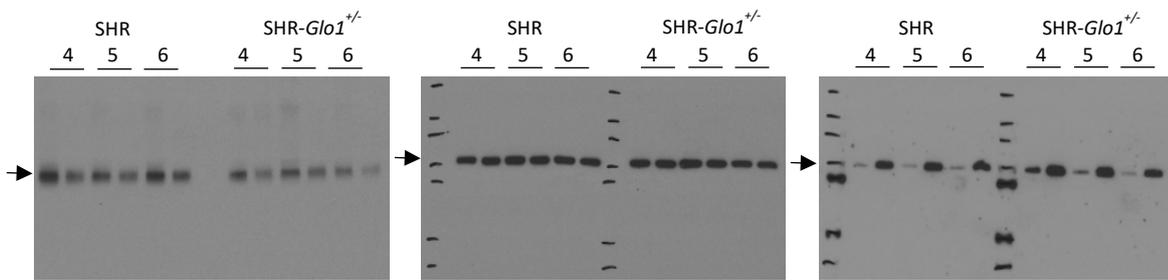


Fig. 3B – Liver tissue samples

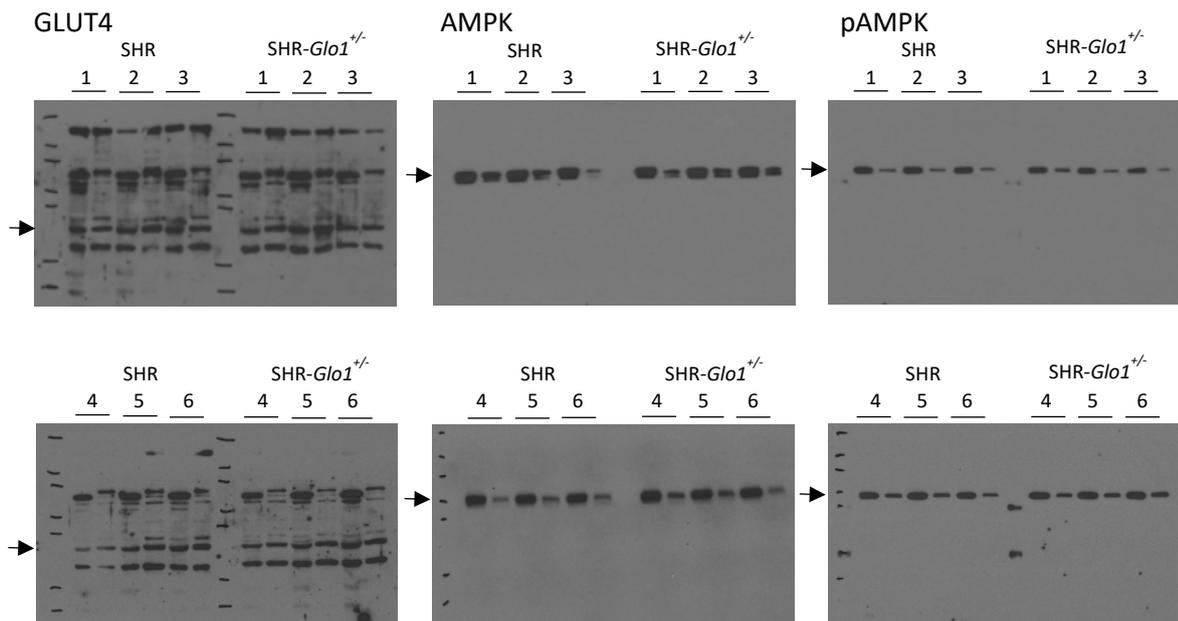


Fig. 3C – White fat tissue samples

