SUPPLEMENTARY DATA

Supplementary Table 1. Metabolic parameters of *WT* and *Vasp*$^{-/-}$ mice received either vehicle or AICAR

	WT		*Vasp*$^{-/-}$	
	ctl	AICAR	ctl	AICAR
Body weight (g)	27.7±1.6	27.0±1.7	27.8±1.0	26.7±1.5
Fed glucose (mg/dl)	131±10	126±9	133±13	123±12
Fast glucose (mg/dl)	85±2	81±13	63±8 *	58±5
Fed insulin (mg/dl)	1.18±0.23	1.22±0.18	1.24±0.20	1.30±0.15
Fast insulin (mg/dl)	0.82±0.07	0.80±0.32	1.03±0.11	0.94±0.08
NEFA (mEq/l)	1.64±0.20	1.46±0.30	1.60±0.03	1.21±0.08 #

Either PBS (ctl) or AICAR (200mg/kg) was injected (sc) daily for 5 days in 12 weeks old *WT* and *Vasp*$^{-/-}$ mice, followed by measurement of metabolic parameters. *p<0.05 vs *WT* ctl, #P<0.05 vs *Vasp*$^{-/-}$ ctl. Data are expressed as means ±SEM (n=5). *WT*; wild type, NEFA; nonesterified fatty acid.

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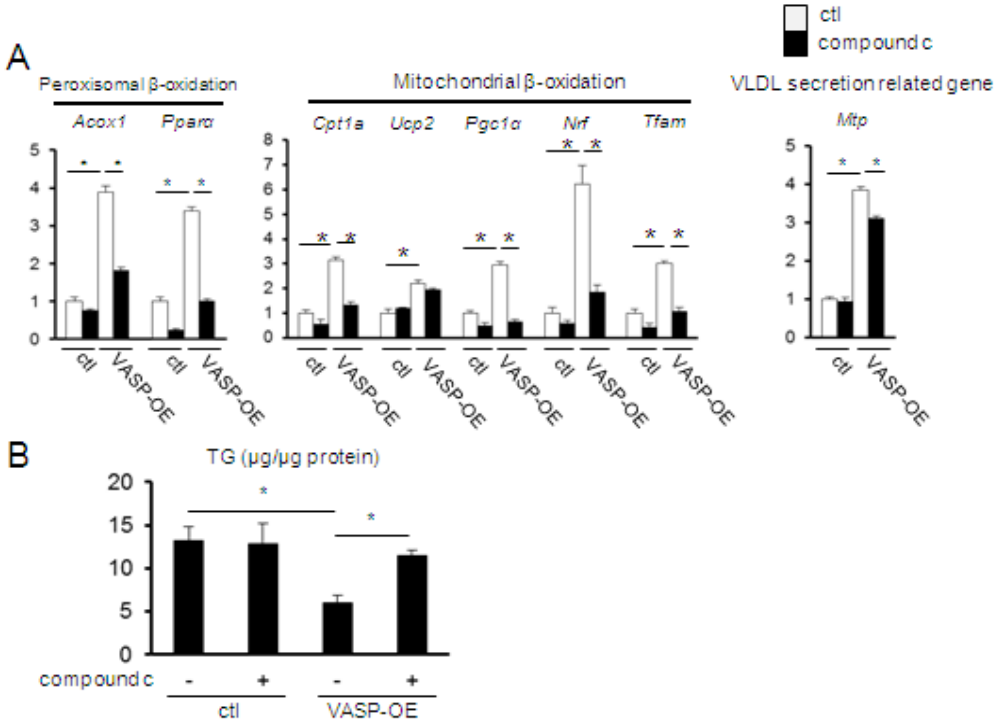
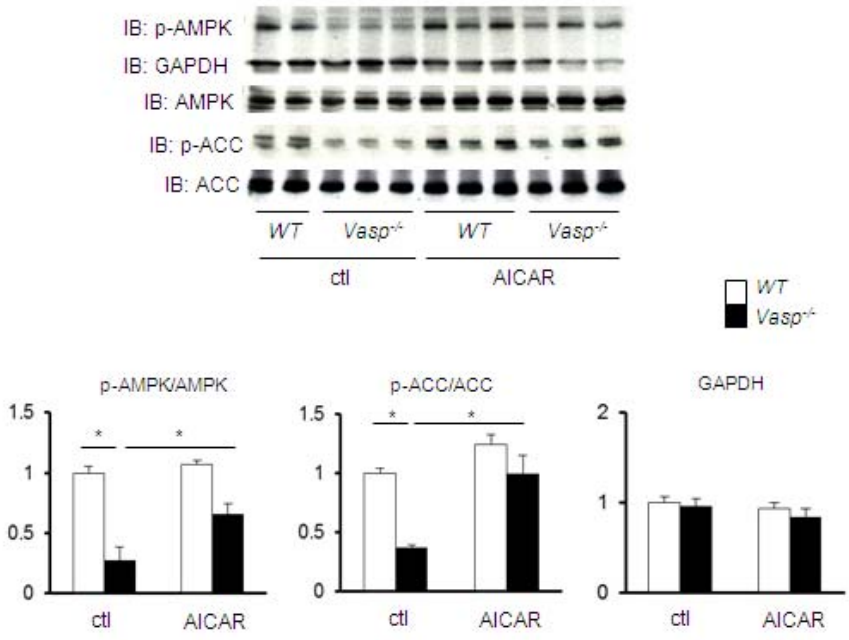
SUPPLEMENTARY DATA

Supplementary Figure 1. Involvement of AMPK signaling in the effect of VASP. (A) RT-PCR analysis of fatty acid oxidation genes or *Mtp* gene in AML12 cells with an AMPK inhibitor, compound c (20 μM, 4 hours). (n=4) (B) Oleic acid (0.1 mM) was used to treat AML12 cells for 24 hours with or without compound c (20μM, 24 hours). (n=4)



Supplementary Figure 2. Restoration of AMPK signaling in *Vasp*$^{-/-}$ mice by AICAR Either AICAR (200 mg/kg) or PBS was injected (sc) daily for 5 days in *WT* and *Vasp*$^{-/-}$ mice, followed by sacrifice after an overnight fast. P-AMPK (Thr172) and p-ACC (Ser79) as measured by Western blot. (n=5) *p<0.05 *WT*, wild type



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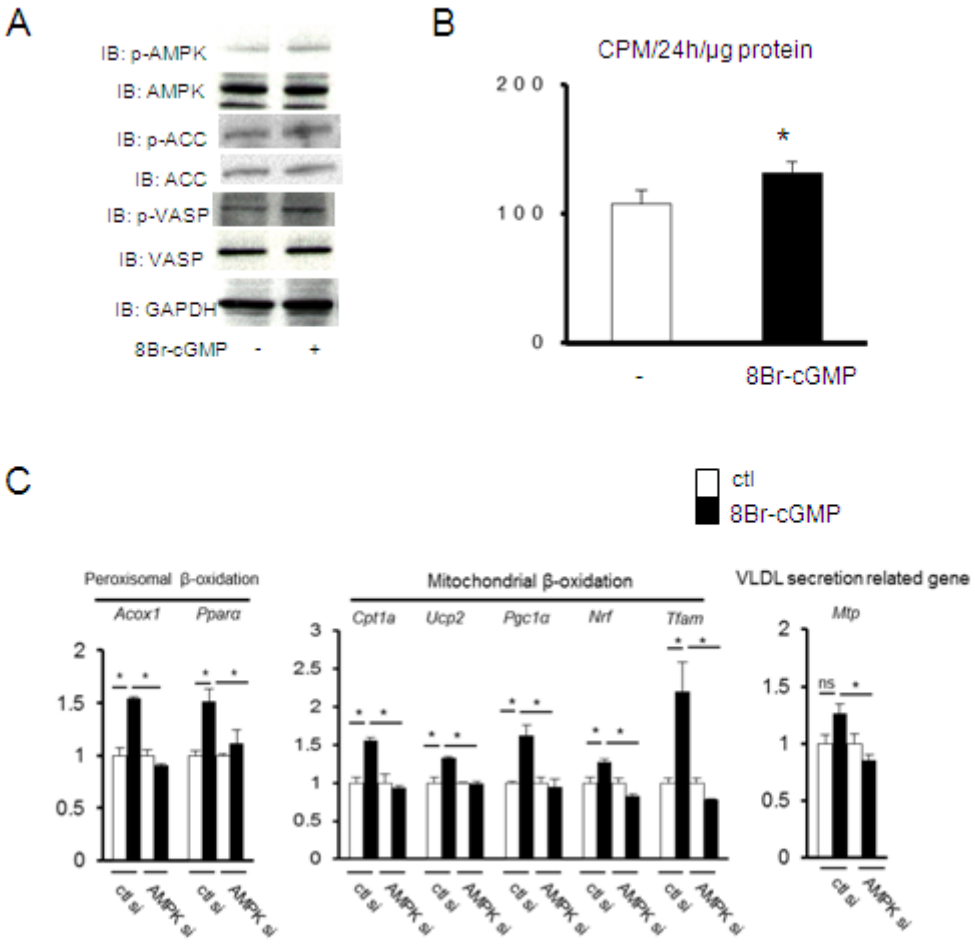
SUPPLEMENTARY DATA

Supplementary Figure 3. Effect of 8Br-cGMP on AMPK signaling and fatty acid oxidation. AML12 hepatocytes were stimulated with 8Br-cGMP (100μM) for 4 hours in the presence of siRNAs for AMPKα1 (*Prkaa1*, 5nM, 48 hours) and α2 (*Prkaa2*, 5nM, 48 hours). (A) p-AMPK (Thr172), p-ACC (Ser79), and p-VASP (Ser239) as measured by Western blot. Representative blots are shown (n=3). (B) Rate of [1-^{14}C]palmitate incorporation into acid-soluble metabolites (n=4). (C) Relative expression of fatty acid oxidation related genes as measured by RT-PCR (n=4) *p<0.05



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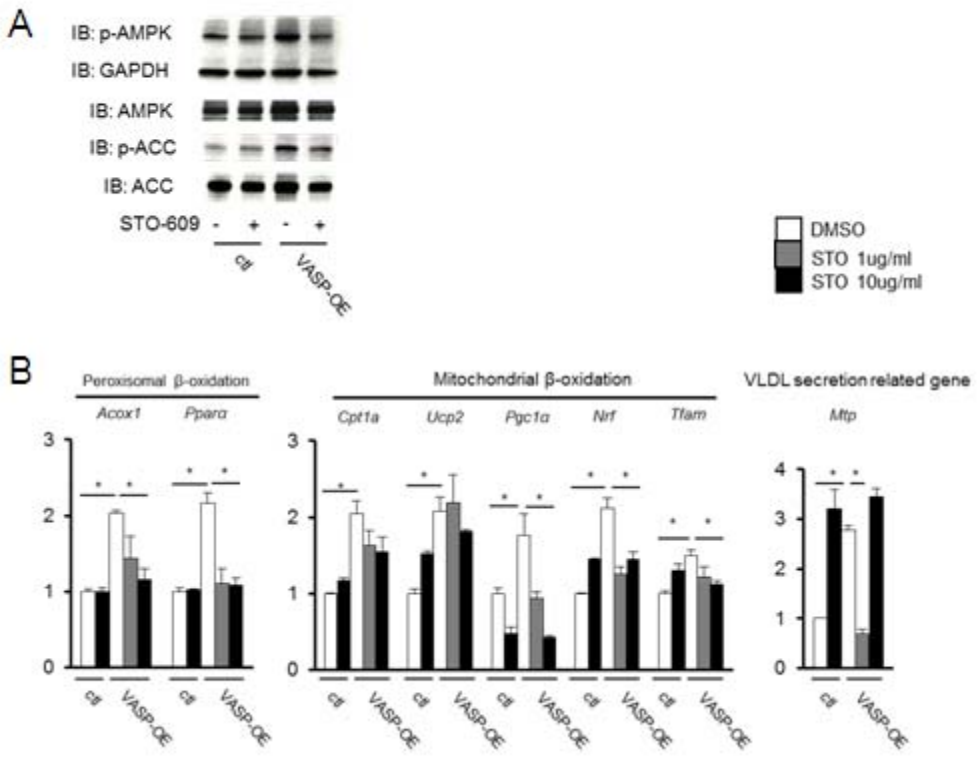
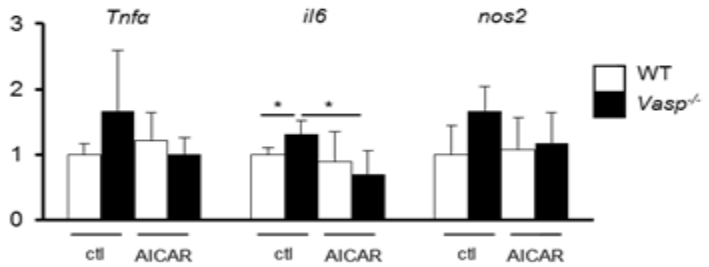
SUPPLEMENTARY DATA

Supplementary Figure 4. CaMKK might be involved in the activation of AMPK by VASP in AML12 cells. (A) Phosphorylation of AMPK (Thr172) and ACC (Ser79) by VASP with or without STO-609 (10μg/ml, 4 hours). (B) STO-609 was treated for 4 hours (1μg/ml or 10μg/ml) in either control of VASP overexpressed cells. Relative mRNA expression of fatty acid oxidation related genes and *Mtp* genes as measured by RT-PCR. (n=3)



Supplementary Figure 5. Alterations of hepatic inflammation by AICAR in *Vasp*$^{-/-}$ mice. 12 weeks old *WT* and *Vasp*$^{-/-}$ mice fed a chow diet were sacrificed after 16 hours fast. RT-PCR analysis of inflammatory genes in the liver. (n=6) *p<0.05 *WT,* wild type



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