

Paradoxical effect of rapamycin on inflammatory stress-induced insulin resistance in vitro and in vivo

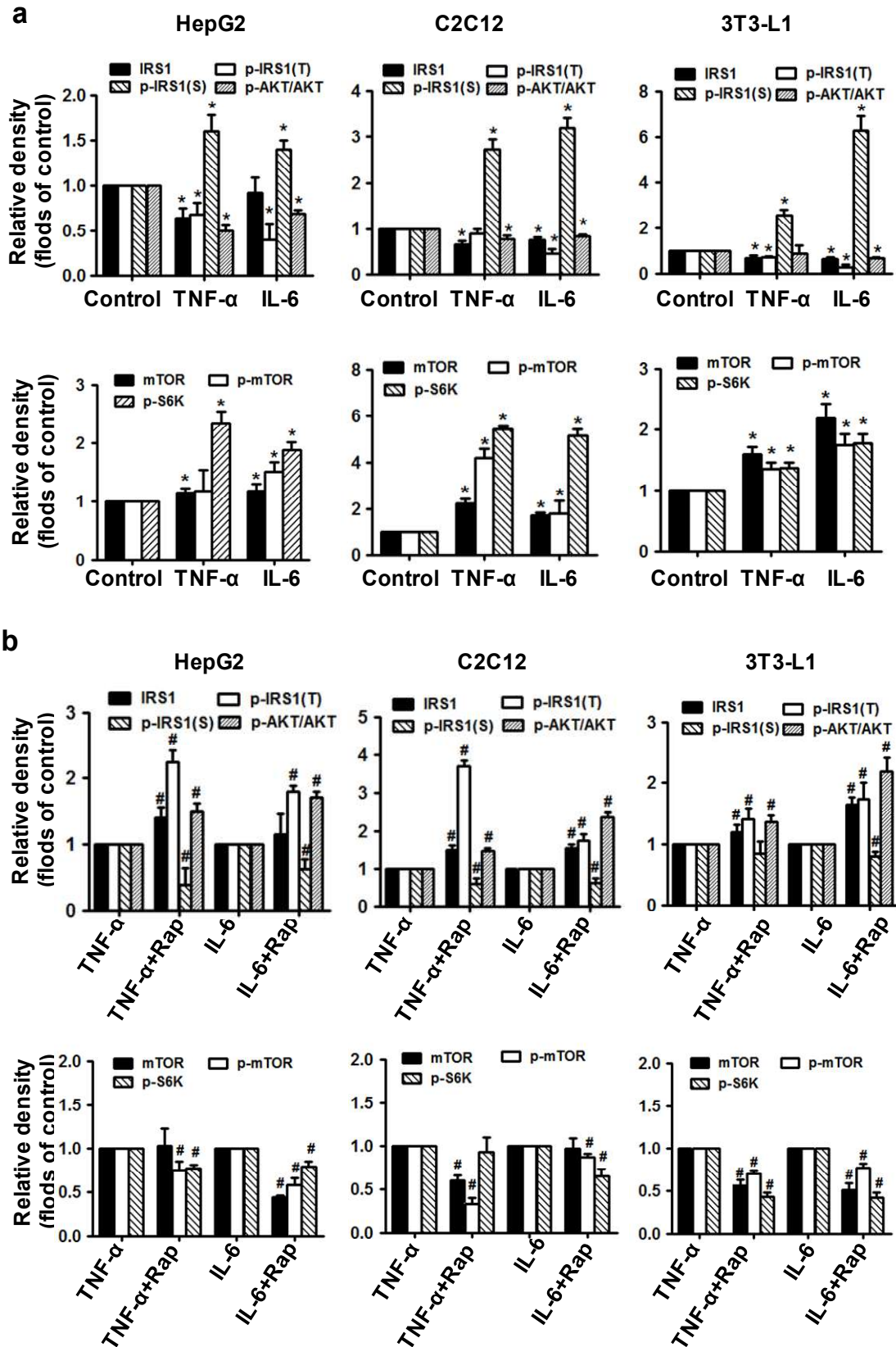
Ping Yang¹, Yunfei Zhao², Lei Zhao¹, Jun Yuan¹, Yao Chen¹, Zac Varghese³, John F. Moorhead³, Yaxi Chen^{1*}, and Xiong Z. Ruan^{1,3}

¹ Centre for Lipid Research, Key Laboratory of Molecular Biology on Infectious Diseases, Ministry of Education, the Second Affiliated Hospital, Chongqing Medical University, Chongqing, 400016, China

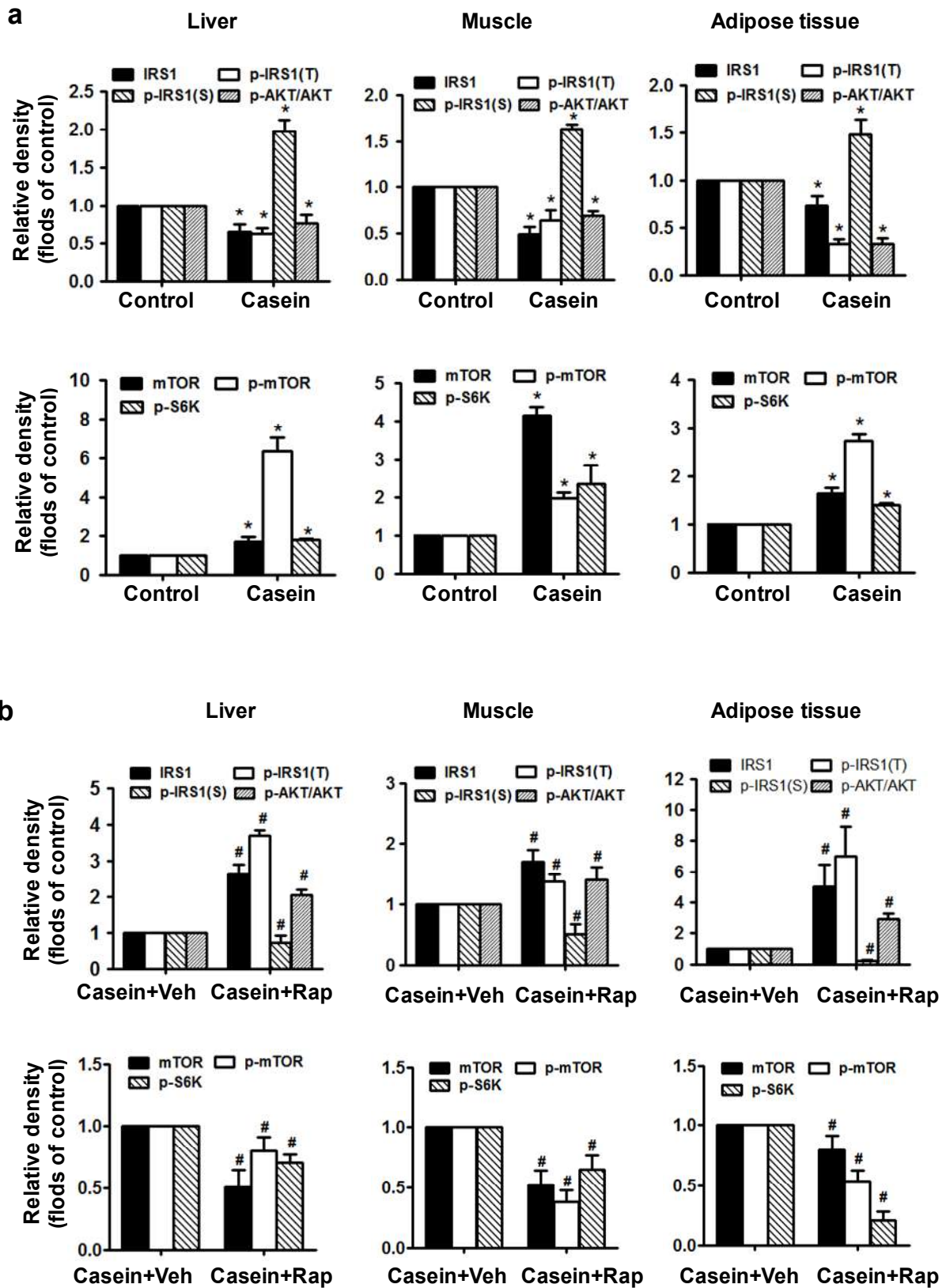
² School of Biological & Chemical Engineering, Chongqing University of Education, Chongqing, 400067, China

³ John Moorhead Research Laboratory, Centre for Nephrology, University College London (UCL) Medical School, Royal Free Campus, London, NW3 2PF, UK

*Correspondence: Dr Y Chen, Centre for Lipid Research, Key Laboratory of Molecular Biology on Infectious Diseases, Ministry of Education, the Second Affiliated Hospital of Chongqing Medical University, Chongqing, 400016, China (e-mail: chenyaixi@cqmu.edu.cn)



Supplementary Figure S1. Relative protein levels of IRS1, p-IRS1 (tyr), p-IRS1 (ser), p-AKT/AKT, mTOR, p-mTOR, p-S6K in cells treated with TNF- α or IL-6 in the absence (a) or presence of rapamycin (b) were detected by western blot. The histogram represents the mean \pm SD (n=3) of the densitometric scans for protein bands from three experiments, normalized by comparison with β -actin. * P < 0.05 versus control, # P < 0.05 versus the inflammatory cytokine treated group.



Supplementary Figure S2. Effects of casein (a) and rapamycin (b) on protein levels of IRS1, p-IRS1 (tyr), p-IRS1 (ser), p-AKT/AKT, mTOR, p-mTOR, p-S6K were detected by western blot. The histogram represents the mean \pm SD (n=3) of the densitometric scans for protein bands from three experiments, normalized by comparison with β -actin. * P < 0.05 versus control, # P < 0.05 versus casein plus vehicle.