**Supplementary data**

Supplemental Figures



Fig. S1 Effect of Pro-Gly on the cell viability in vitro. Cell counting kit-8 assay was used to examine HepG2 cells viability after 24 h incubation with 0.5 mM Pro-Gly (n=6). Pro-Gly had no effect on cell viability in HepG2 cells. Data are presented as mean±SEM.



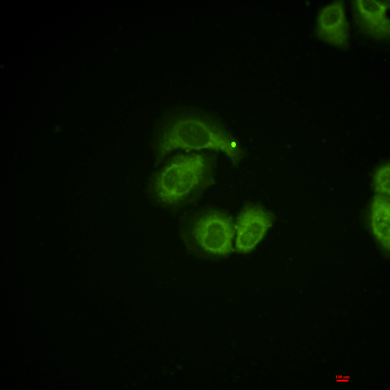
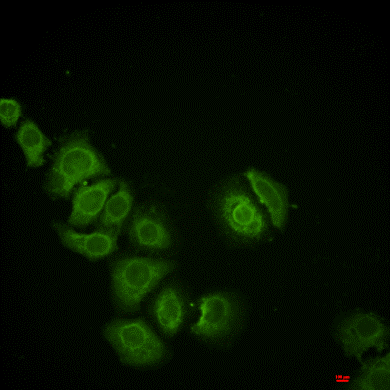
Fig. S2 Effects of chronic injection of Pro-Gly on *ALT、OTC* and *SDH* mRNA levels. The 30 four-week-old female mice were intraperitoneal injected with physiological saline (Control, n=10) or Pro-Gly (150 mg/kg, n=10) every other day for 35 days. Pro-Gly had no significant effects on the *ALT*, *OTC* and *SDH* mRNA levels compared with control group, suggesting that injection of Pro-Gly had no effect on liver toxicity *in vivo*. Data are presented as mean±SEM.



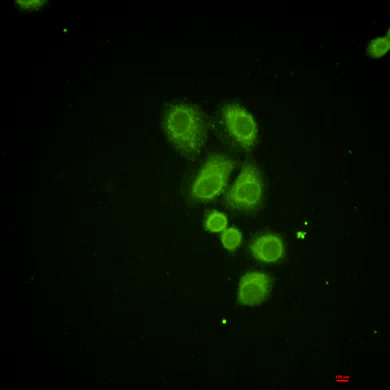
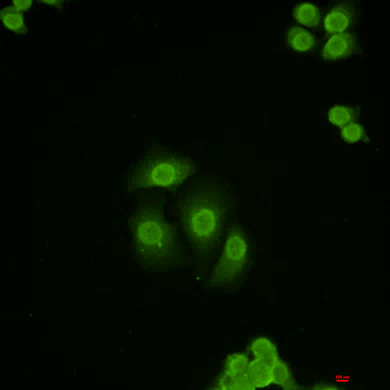
Fig. S3 Effect of Pro-Gly on the relative fluorescence intensity of p-STAT5 in nuclei of HepG2 cells. HepG2 cells were incubated in the presence of Pro-Gly (0.5 mM) and/or AZD1480 (1 μM) for 6 h and phospho-STAT5 translocation to nuclei was detected by ICC. The fluorescence intensity was quantified with Nis-Elements BR software (Nikon Instruments, Tokyo, Japan) and the mean relative fluorescent intensity (MRFI) from the nucleus was analyzed (Control: n=19, Pro-Gly: n=23, AZD1480: n=26, Pro-Gly+AZD1480: n=29). Pro-Gly treatment increased the relative fluorescence intensity of phospho-STAT5 in HepG2 cells nuclei. However, the increased intranuclear p-STAT5 level in response to Pro-Gly was eliminated in the presence of JAK2 inhibitor AZD1480, which alone had no effect on the level of nuclear p-STAT5*.* Data are presented as mean ± SEM. Bars that do not share the same letter are significantly different (*P* < 0.05).

Images used for fluorescence intensity analysis for Fig. S3.

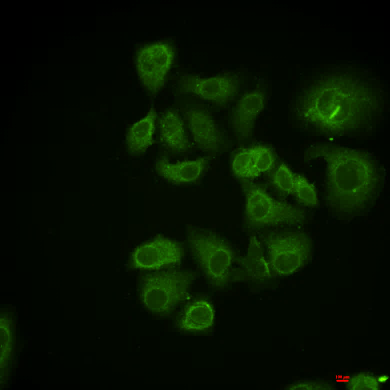
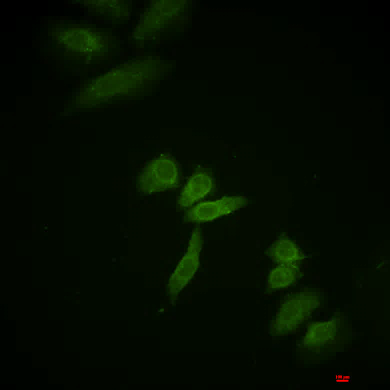
Control

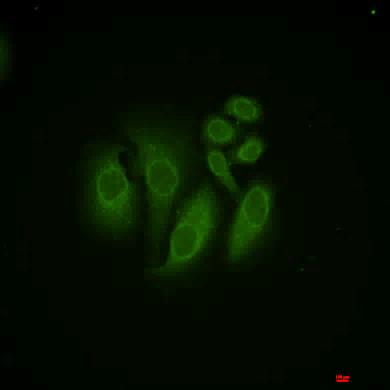
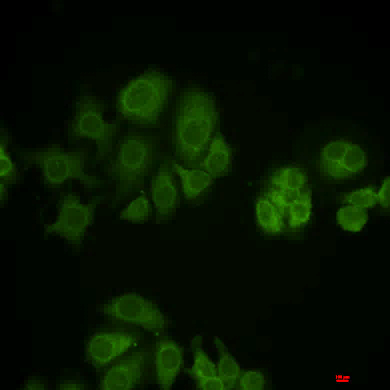
Pro-Gly

AZD1480

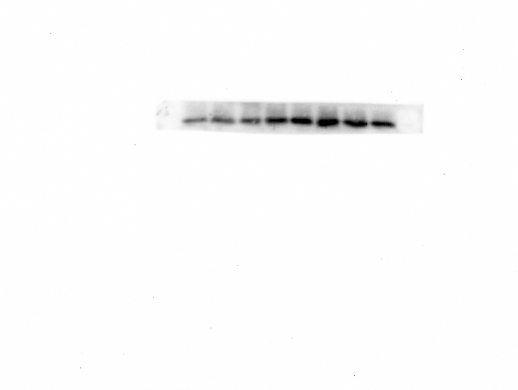
Pro-Gly+AZD1480

The raw bands of Western blot

Figure 1

IGF-1

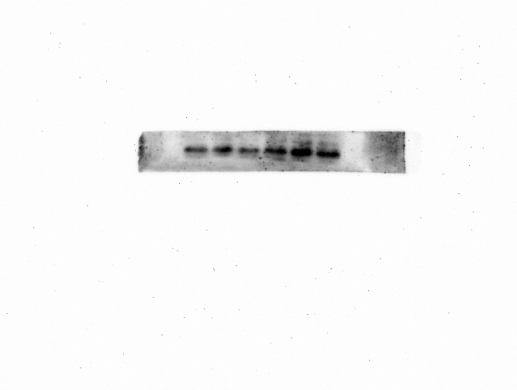


β-tubulin



Figure 2

IGF-1



β-actin (the last six)

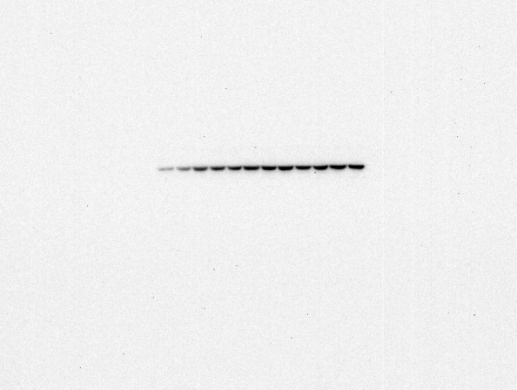
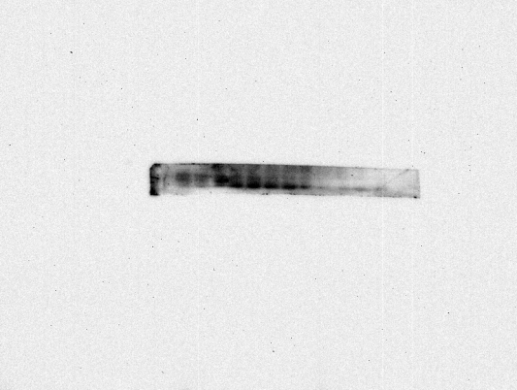


Figure 3

IGF-1



β-actin

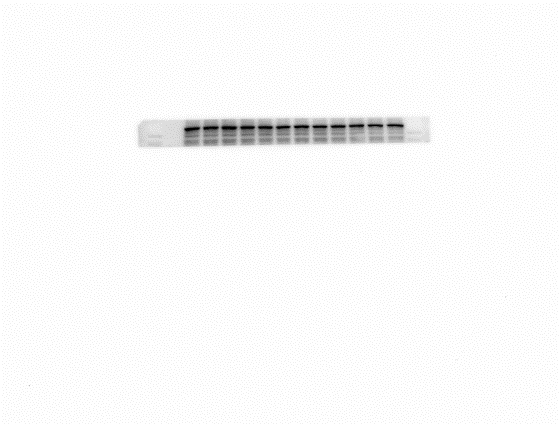


Figure 4A

p-JAK2



JAK2



p-STAT5



STAT5



β-actin



Figure 4C

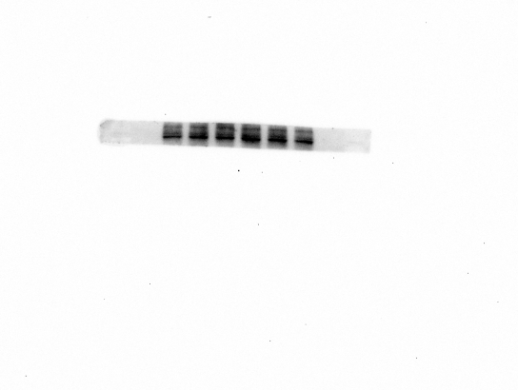
IP: STAT5



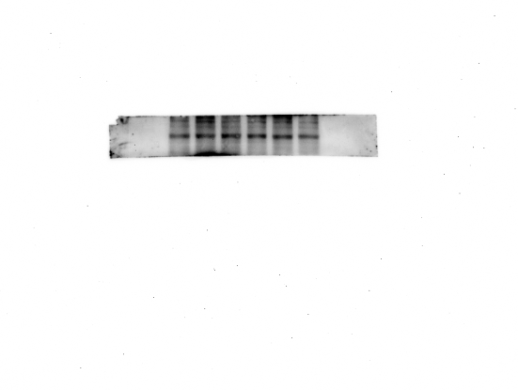
IP: JAK2



Input: STAT5



Input: JAK2



β-actin

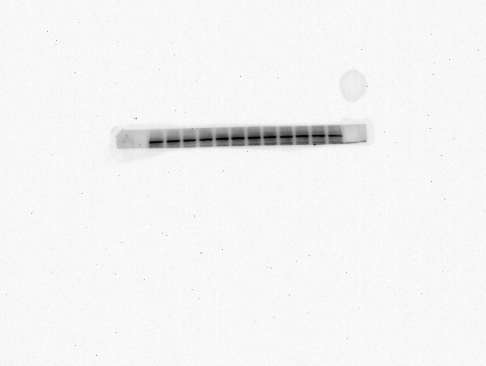


Figure 5

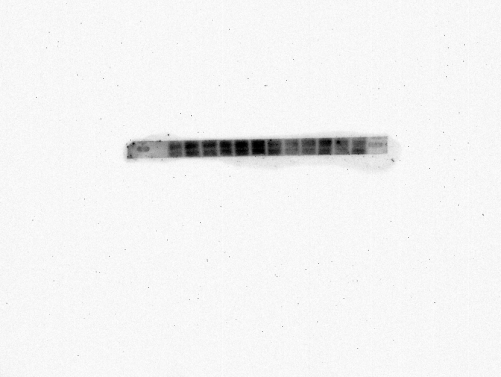
p-JAK2



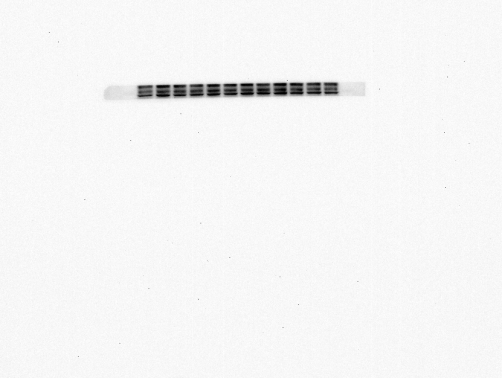
JAK2



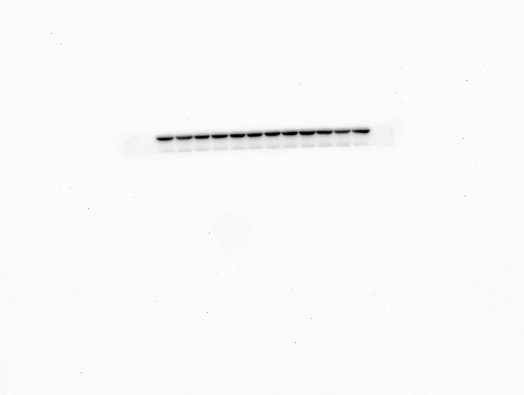
p-STAT5



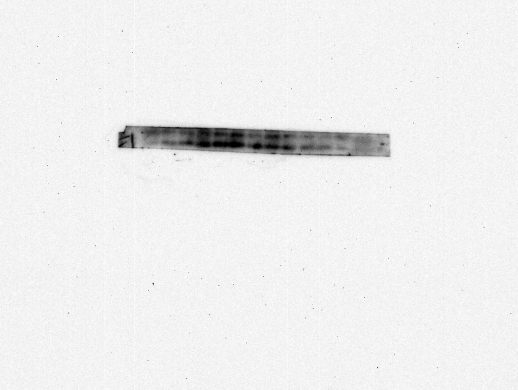
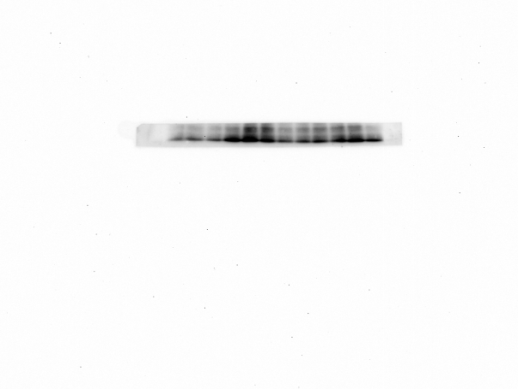
STAT5

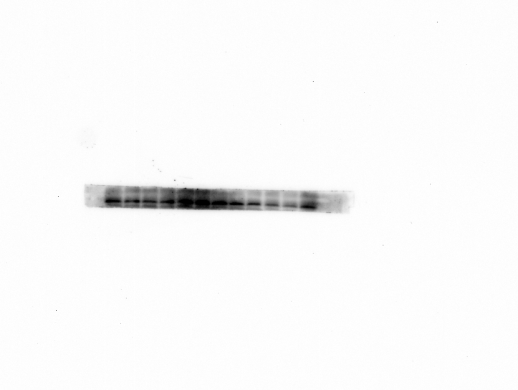
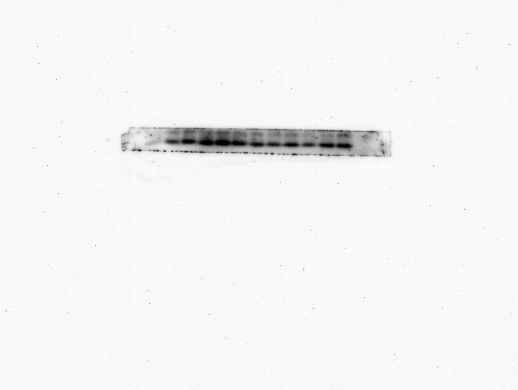


β-actin



IGF-1





β-actin

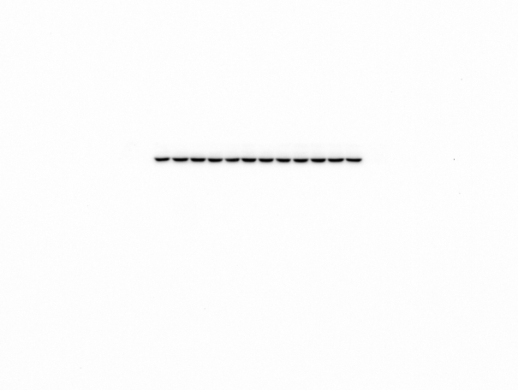
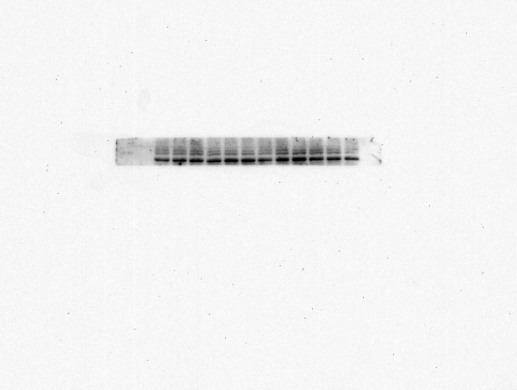
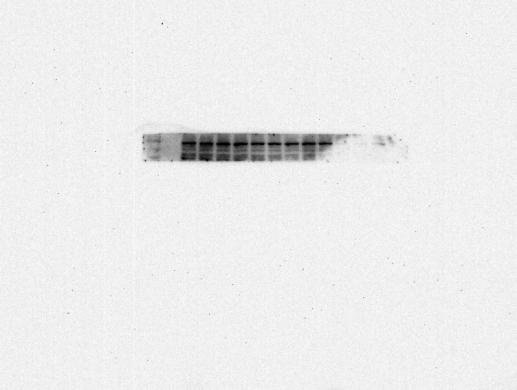


Figure 6B

p-JAK2 (the first six)



JAK2 (the first six)



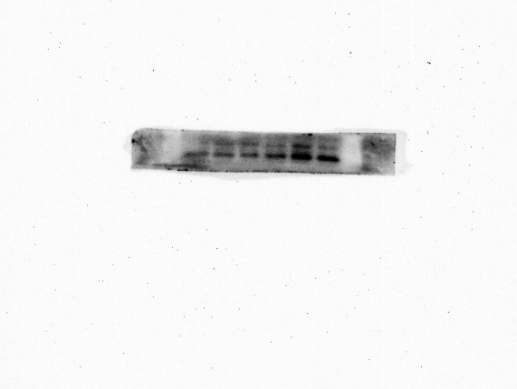
p-STAT5



STAT5



IGF-1



β-actin

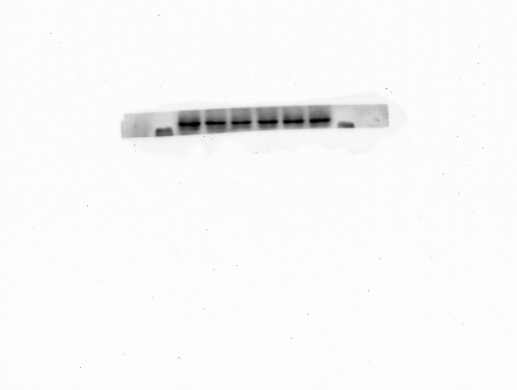
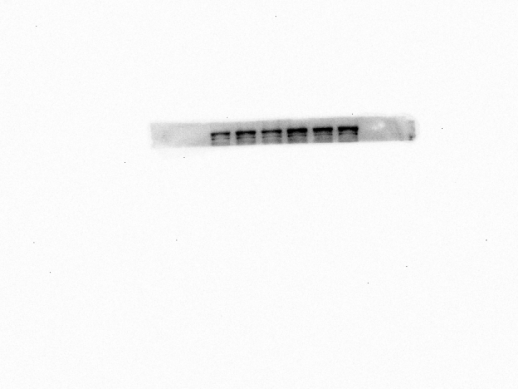


Figure 6F

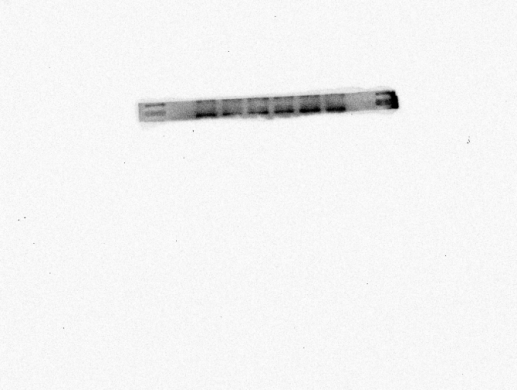
p-JAK2



JAK2



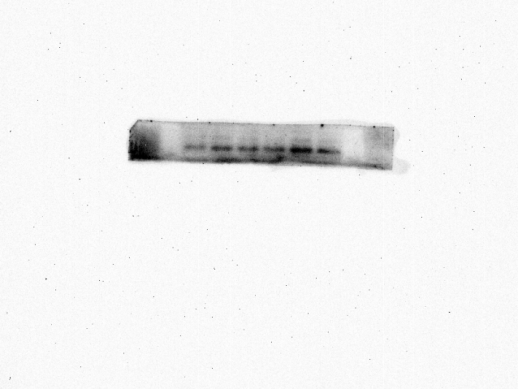
p-STAT5



STAT5



IGF-1



β-actin

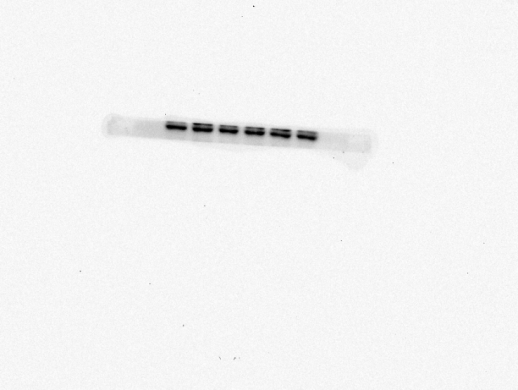
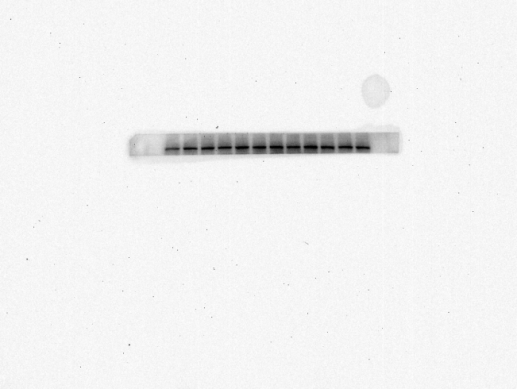


Figure 7

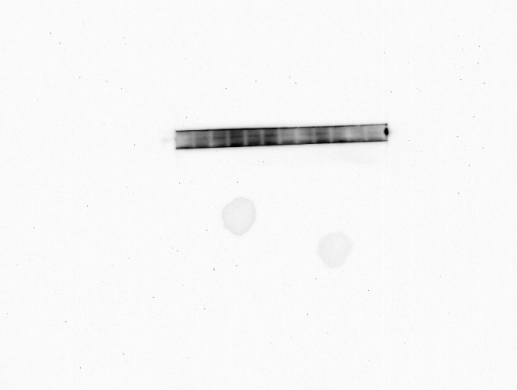
p-JAK2



JAK2



p-STAT5



STAT5



IGF-1



β-actin

