

## Online Supplementary Material

### Figure 1

HEp-2 cells were infected with *H. pylori* wildtype strain 7.13 for 4hrs or incubated with IL-6 (100ng/ml for 30 min). Cell lysates were probed for phospho-STAT3 via Western Blotting.

### Figure 2

Whole cell lysates collected from control or *H. pylori* 60190- infected cells at various MOIs (25-100) for up to 4hrs were probed for phospho-STAT3 and STAT3 proteins.

### Figure 3

INT 407 cells were infected with *H. pylori* and cell lysates collected and probed for phospho-STAT3 via Western Blotting.

### Figure 4

(A) HEp- 2 cells were infected with *H. pylori* and nuclear extracts were collected and probed for pSTAT3, STAT3 and actin.

(B) Whole cell lysates or nuclear extracts were collected from control, IL-6 treated and *H. pylori* infected cells and probed for serine 727 phosphorylated STAT3, STAT3 and actin.

**Figure 5**

HEp-2 cells were incubated with heat-killed *H. pylori* and viable *H. pylori* at an MOI of 50:1 for 4hrs. Whole cell lysates were probed for pSTAT3 and STAT3 signals.

**Figure 6**

HEp-2 cells were infected with *H. pylori* wildtype strain 251 and its type IV secretion system mutant cagM. Cell lysates were probed for STAT3 activation.

**Figure 7**

HEp-2 cells were transfected with CagA-GFP and cell lysates were collected and co-immunoprecipitated with an anti-CagA antibody. Western Blotting was performed using a specific SHP-2 antibody. SHP-2 identified at MW 72KDa and CagA complex at MW 130kDa.

**Figure 8**

To determine the minimal concentration of IL-6 able to stimulate STAT3 activation, cells were administered four different concentrations of IL-6; 0, 80, 100pg/ml, 1ng/ml, 2ng/ml and probed for pSTAT3 expression using ptyr-705 STAT3 Ab, n=3.

### **Figure 9**

HEp-2 cells were incubated with sant7 and subsequently treated with IL-6 and IL-11. Whole cell lysates were collected and probed for phospho-STAT3 and STAT3 using Immunoblotting.

### **Figure 10**

Mongolian gerbils were infected for 6 weeks with *H. pylori* carcinogenic strain 7.13 or sham infected. Stomach sections were collected and homogenized. Lysates were probed via Western Blotting using pSTAT3 and STAT3 antibodies.

### **Figure 11**

H&E staining performed on paraffin embedded tissue sections from (A) control (B) *H. pylori* CagA+ and (C) *H. pylori* CagA- infected stomach sections.