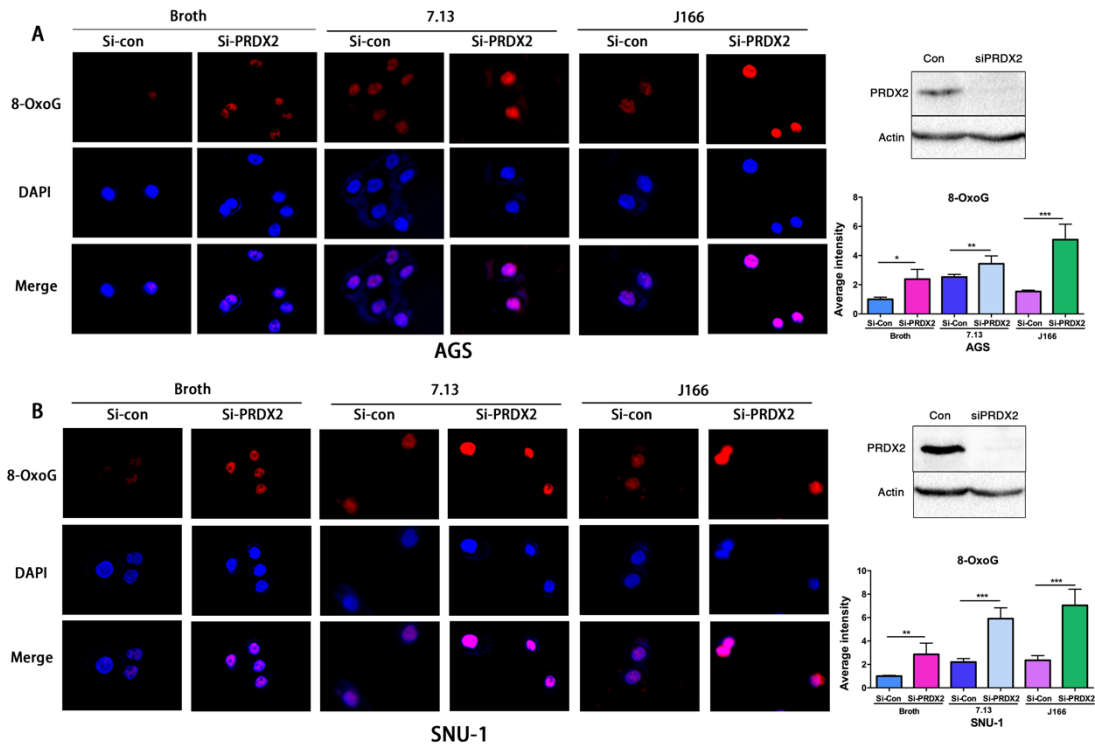




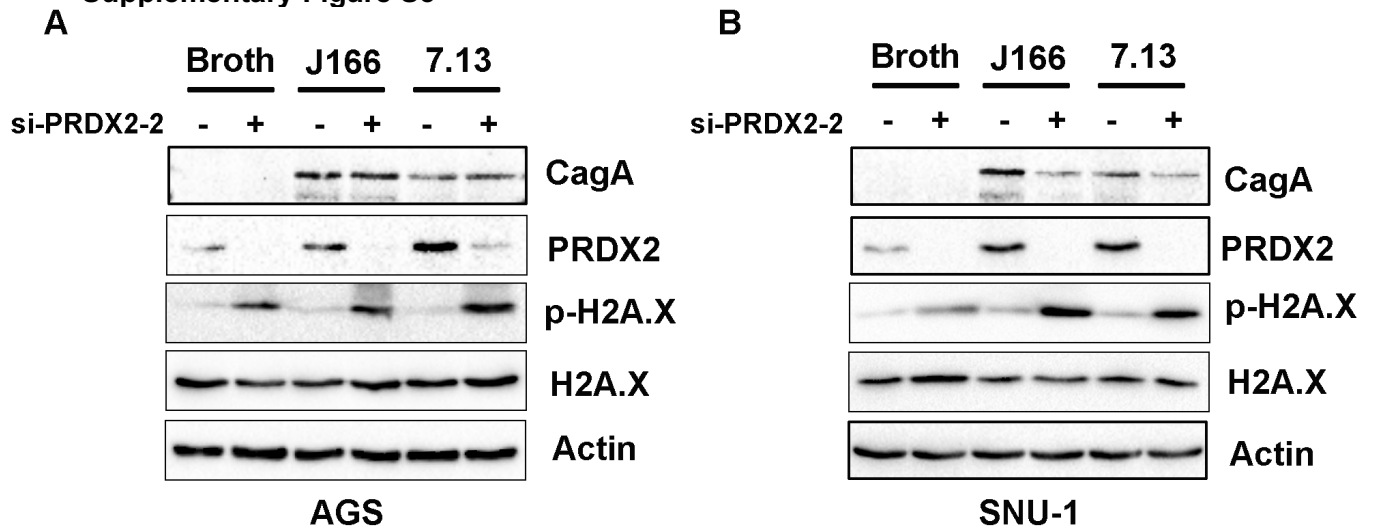
## Supplementary Figure S2



### Knockdown of PRDX2 enhanced *H. pylori*-induced oxidation DNA damage

(A) left panel: Immunofluorescence of 8-Oxoguanine was performed on in control or PRDX2 siRNA knockdown AGS cells with or without *H. pylori* (7.13 or J166) infection for 6h. Right upper panel: Western blot confirmed the knockdown of PRDX2 was efficient in AGS cells. Right lower panel: quantification data for A. (B), similar experiment in SNU-1 cells as in A. \*, P<0.05, \*\*, P<0.01, \*\*\*, P<0.001. Original magnification: 20x.

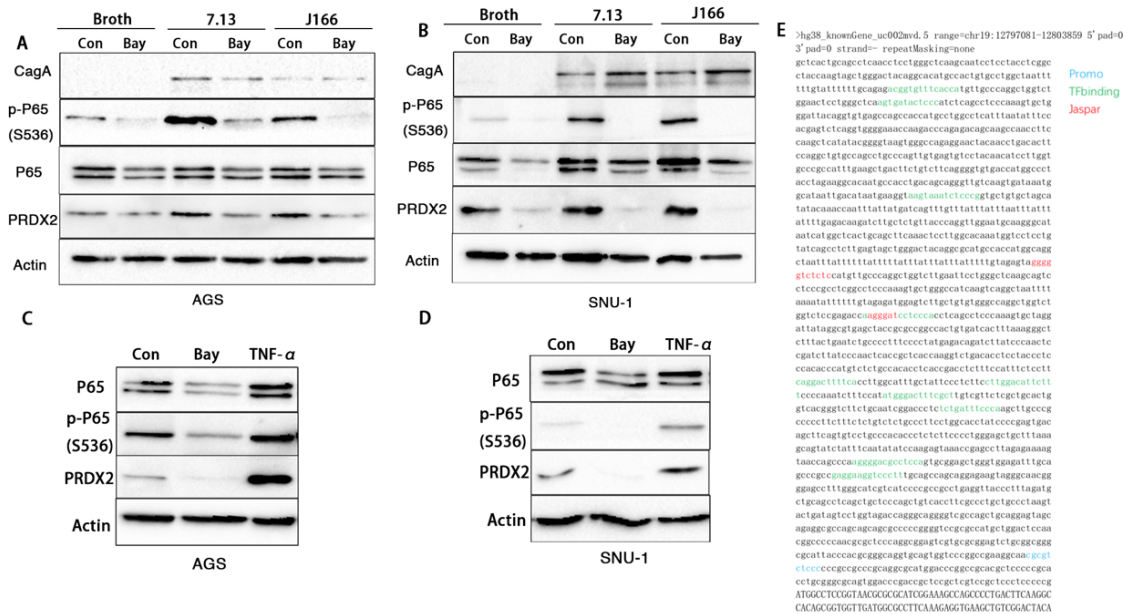
Supplementary Figure S3



**Knockdown of PRDX2 increases the expression of p-H2A.X with or without *H. pylori* infection.**

(A) Western blot analysis of CagA, PRDX2, p-P65, P65, p-H2A.X, H2A.X and  $\beta$ -actin in control or PRDX2 siRNA-2 knockdown AGS cells with or without *H. pylori* (7.13 or J166) infection for 6h. (B), similar result in SNU-1 cells treated with siCon or PRDX2 siRNA-2 as (A).

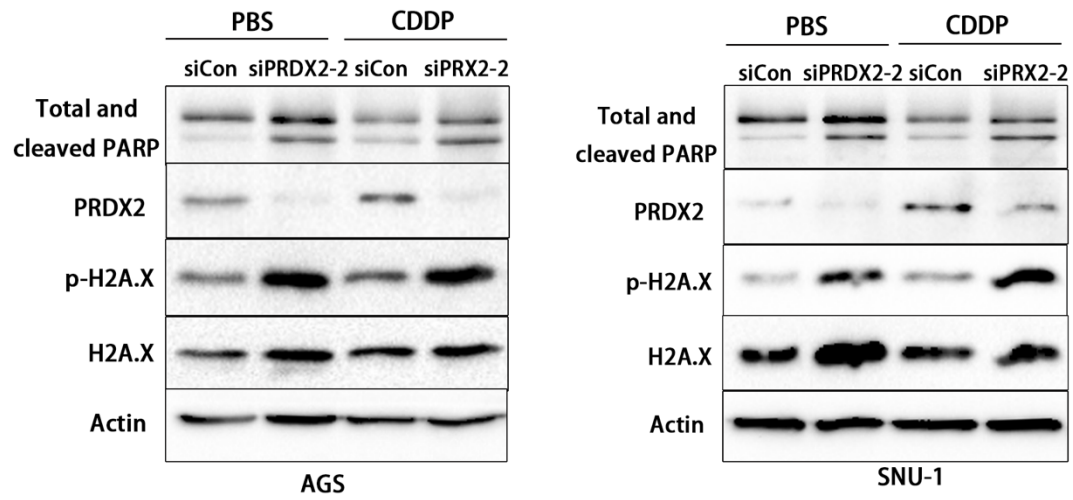
## Supplementary Figure S4



### NF- $\kappa$ B regulates the expression of PRDX2.

(A) Western blot analysis of CagA, PRDX2, p-P65, P65 and  $\beta$ -actin in control or Bay-11-7082 treated AGS cells with or without *H. pylori* (7.13 or J166) infection for 6h. (B), similar experiments in SNU-1 cells as (A). (C) Western blot analysis of p-P65, P65, PRDX2 and  $\beta$ -actin in AGS cells treated with PBS, Bay-11-7082 for 9 h or TNF- $\alpha$  for 0.5 h. (D), similar experiments in SNU-1 cells as in C. (E) Putative binding sites of P65 and promoter sequence of PRDX2 predicted by Promo ([http://algen.lsi.upc.es/cgi-bin/promo\\_v3/promo/promoinit.cgi?dirDB=TF\\_8.3](http://algen.lsi.upc.es/cgi-bin/promo_v3/promo/promoinit.cgi?dirDB=TF_8.3)), TFbinding (<http://tfbind.hgc.jp>) and Jaspas (<http://jaspar.genereg.net>). \*, P<0.05, \*\*, P<0.01, \*\*\*, P<0.001.

### Supplementary Figure S5



#### Knockdown of PRDX2 induced the expression of p-H2A.X and cleaved-PARP.

(A) and (B) Western blot analysis of PARP, cleaved-PARP, PRDX2, P-H2A.X, H2A.X and  $\beta$ -actin in AGS or SNU-1 cells treated with siCon or PRDX2 siRNA-2.