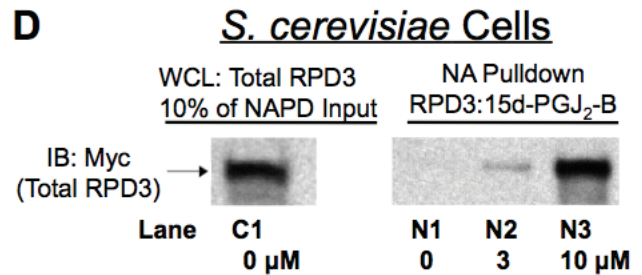
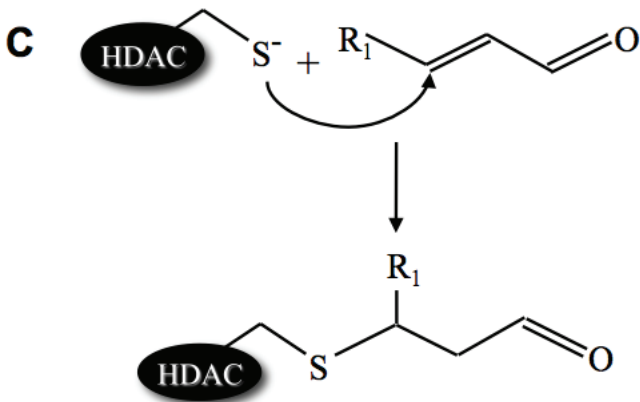
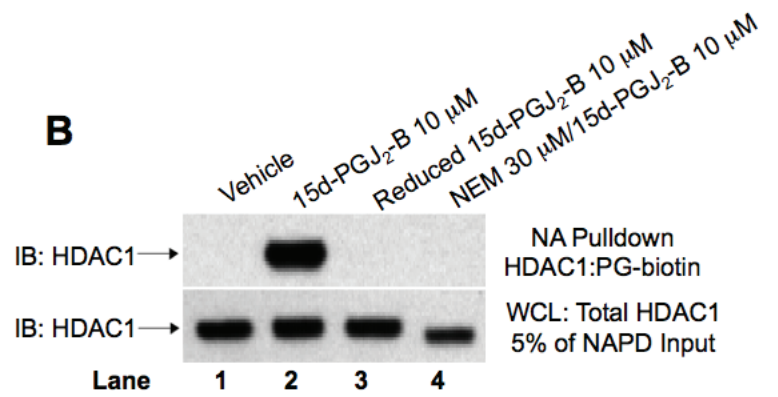
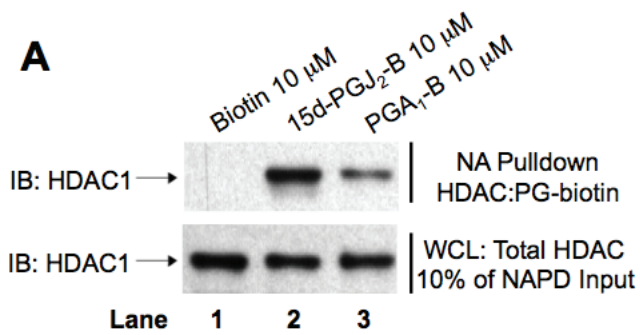


**SUPPLEMENTAL FIGURE 1. Biotin Cyclopentenone PG Analogs Modify Cellular HDAC via Michael Addition.** (A) Immunoblots of HDAC1 protein in HL-60 cell lysates and carbonylated HDAC1 (HDAC1:PG-biotin) conjugates isolated by biotin capture. Cells were treated with 10  $\mu$ M 15d-PGJ<sub>2</sub>-B (lane 2), PGA<sub>1</sub>-B (lane 3), or vehicle (lane 1) for 30 minutes. (B) Similar immunoblots of total and carbonylated HDAC1 from cells treated with 10  $\mu$ M 15d-PGJ<sub>2</sub>-B (lane 2), sodium borohydride treated 15d-PGJ<sub>2</sub>-B (lane 3), or cells pretreated with 30  $\mu$ M N-ethylmaleimide for 30 minutes before treatment with 10  $\mu$ M 15d-PGJ<sub>2</sub>-B (lane 4). (C) Schematic representation of a Michael addition reaction between cysteinyl thiolate of HDAC and electrophilic  $\beta$ -carbon of an  $\alpha,\beta$ -enone. (D) Immunoblots of RPD3 protein in *S. cerevisiae* cell lysates and carbonylated RPD3 (RPD3:PG-biotin) conjugates isolated by biotin capture. Growing cells were treated either vehicle or 15d-PGJ<sub>2</sub>-B (3 or 10  $\mu$ M) for 60 minutes.

**SUPPLEMENTAL FIGURE 2. Carbonylation of HDAC1 by J-series Dehydration Products of PGD<sub>2</sub>.** (A) Schematic of PGD<sub>2</sub> dehydration into electrophilic PGJ metabolites. (B) Time-dependent carbonylation of HDAC1. (C) Immunoblots of HDAC1 (*arrows*), from HCT116 cells treated with 15d-PGJ<sub>2</sub>-B or its precursor, PGD<sub>2</sub>-B. Lower immunoblot panels depict total HDAC1 in cell lysates while the upper immunoblot panels depict carbonylated HDAC1 (i.e. HDAC1:15d-PGJ<sub>2</sub>-B covalent adducts isolated by biotin capture on NeutrAvidin beads). HDAC1:15d-PGJ<sub>2</sub>-B covalent adducts were detected within 10 minutes in cells treated with 1  $\mu$ M 15d-PGJ<sub>2</sub>-B (C - left) or with 15  $\mu$ M PGD<sub>2</sub>-B, the precursor for electrophilic J-series prostaglandins (C - right). The graph in panel B represents the signal density of the immunoblots in panel C.

## Supplemental Figure 1



## Supplemental Figure 2

