Su*pplemental Fig. S1*

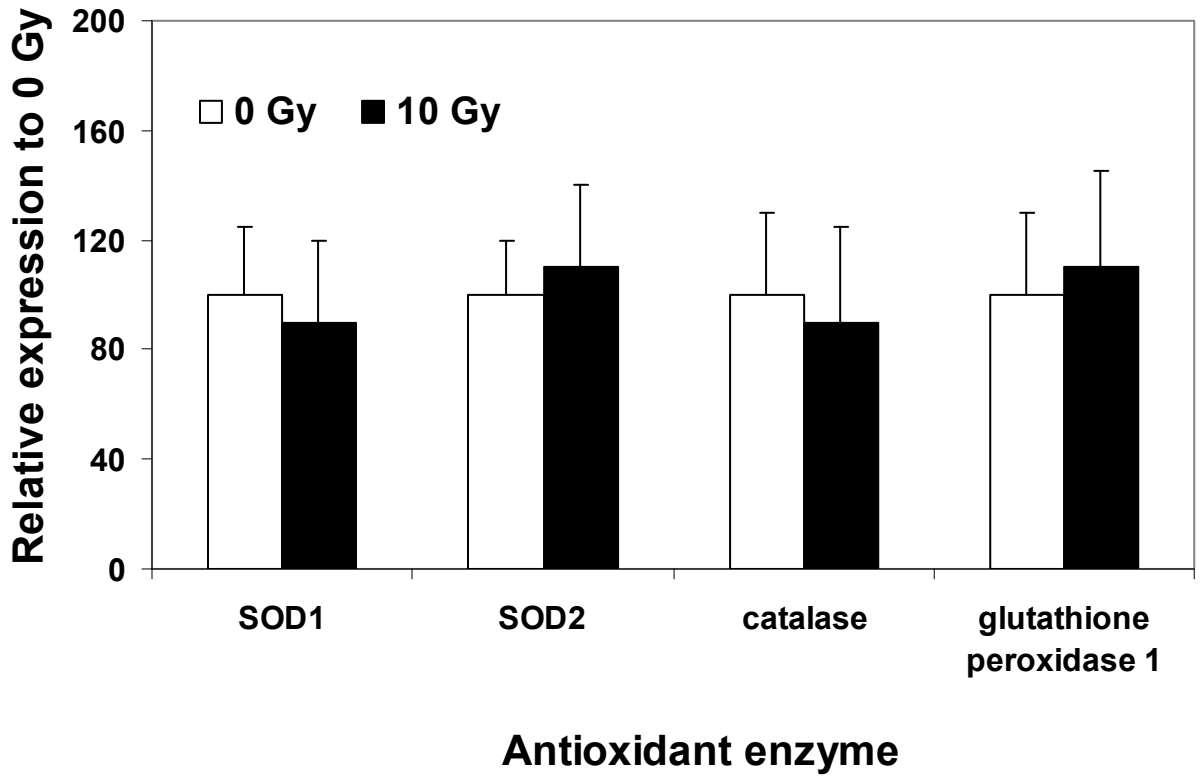

Fig. S1. Expression of antioxidant enzymes in mice acutely irradiated with 10 Gy, and then sacrificed 10 d postirradiation. At this time, intestinal sugar transport has already decreased by ~50% in irradiated mice [7]. There were, however, no changes in mRNA abundance of antioxidant enzymes in the gut.

Supplemental Fig. S2

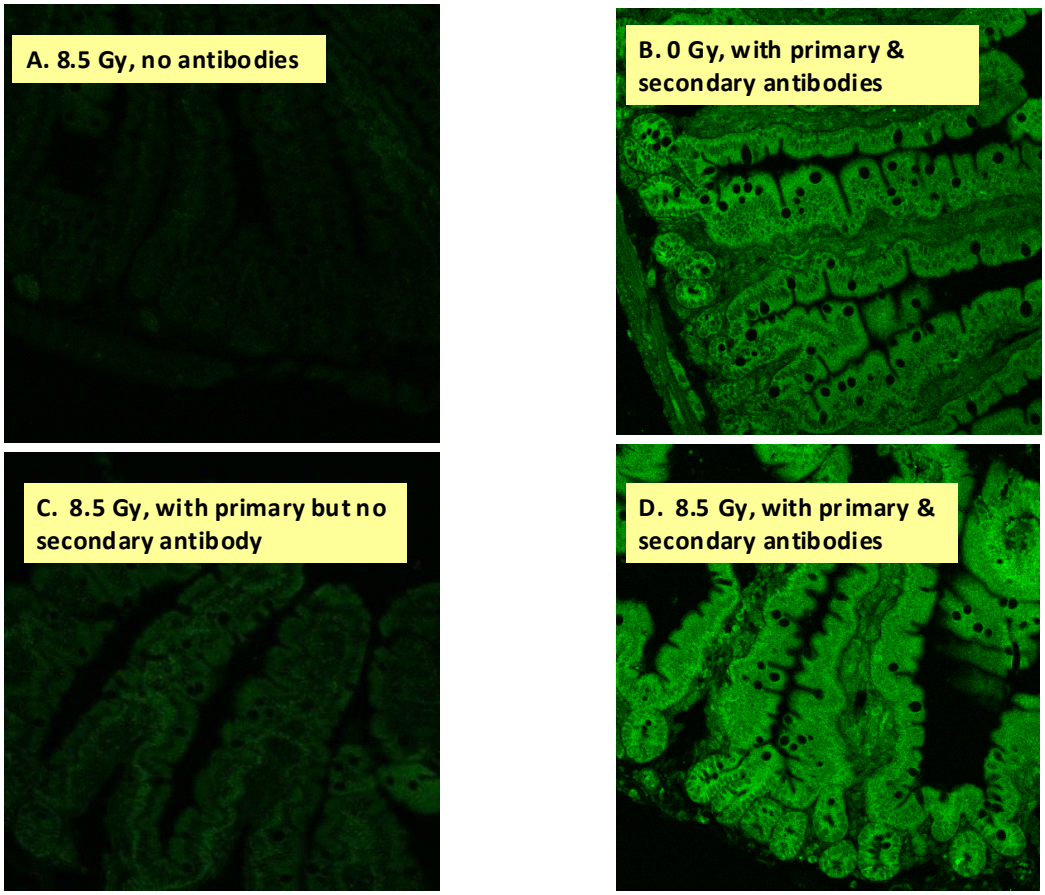

Fig. S2. Location of the oxidative stress biomarker 4HNE in the intestine of irradiated mice. The irradiated and unirradiated mice were taken from a batch of mice different from those shown in Fig. 5. (***A***) section from irradiated mice, no antibodies; (***B***) unirradiated mice with primary and secondary antibodies; (***C***): irradiated mice with primary but no secondary antibody; (***D***) irradiated mice with primary and secondary antibodies. Results suggest that most of the 4HNE are found in epithelial cells, and levels seemed to increase upon irradiation.

Supplemental Fig. S3

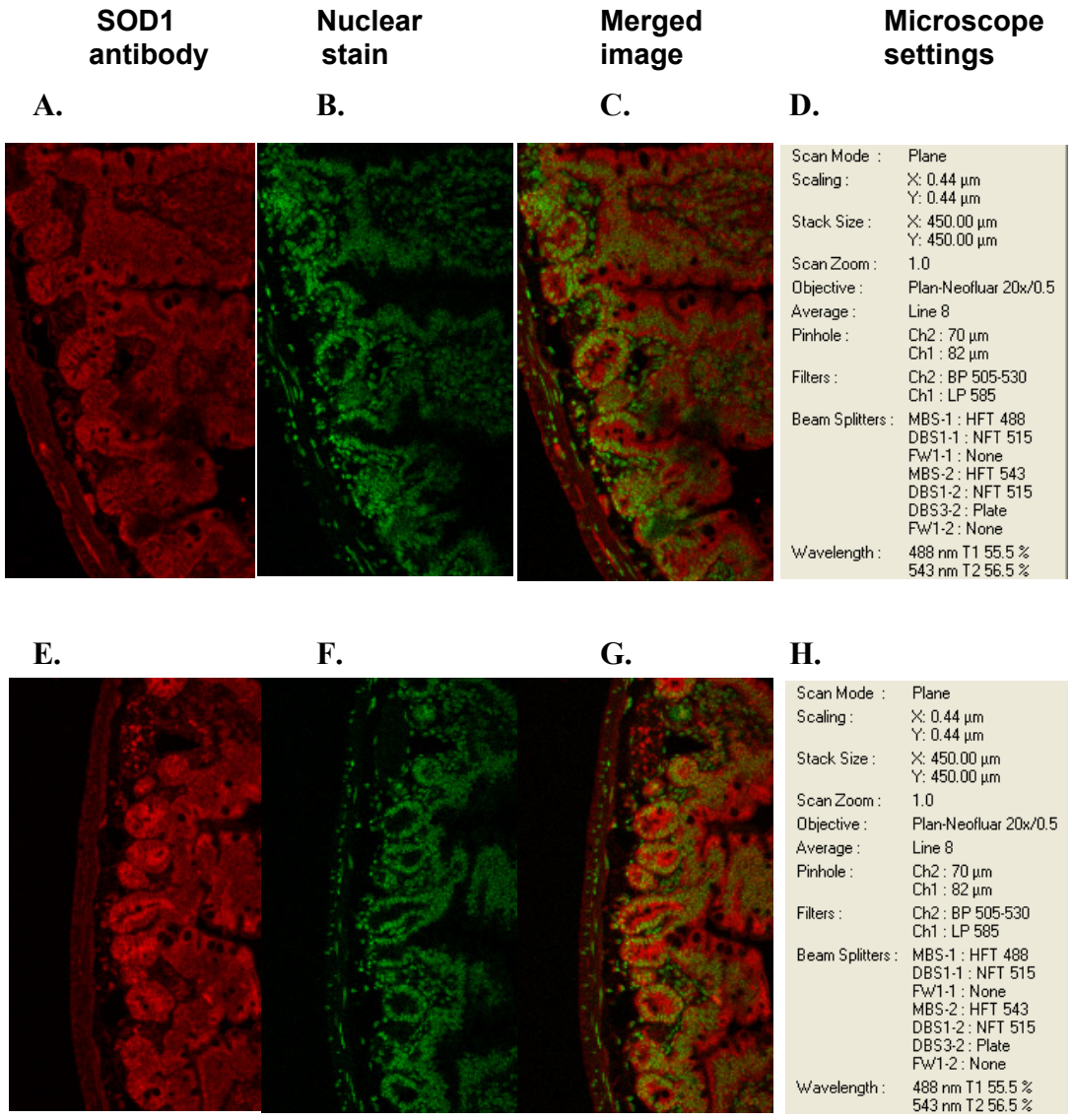

Fig. S3. Immunolocalization of SOD1 (red) in the small intestine after acute whole-body irradiation with 0 (top row, ***A - C***) and 8.5 Gy (bottom row, ***E - G***). Confocal microscope settings used to obtain the images from unirradiated (***D***) or irradiated (***H***) mice are provided and are the same for both sets of images. Like Fig. 6, increases in fluorescence intensity of the SOD1 label of 8.5Gy (***Panel E***) are greater than those of the 0 Gy mouse (***Panel A***), particularly in the crypt regions, and are mainly cytosolic (***Panels C and G***). In contrast, levels of nuclear staining are similar (***Panels B and F***).

Supplemental Fig. S4.

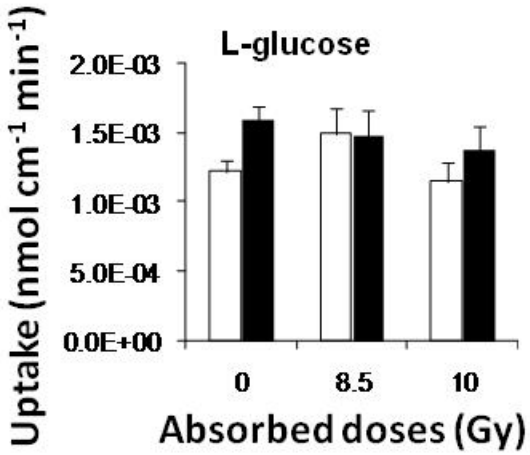

Fig. S4. Uptake of L-glucose per cm of small intestine at day 8 post-irradiation. Mice were fed with control, unsupplemented diet (open bars) or with a vitamin ACE supplanted diet (filled bars). Results are means (± SE) of 6 independent experiments. There was no significant effect of diet and radiation dose on L-glucose uptake which represents passive permeability of the intestinal mucosa to molecules of similar size, shape and charge as D-glucose.