Supplemental Figure 1: EP_1 receptor immunolocalization in normal and hyperplastic mouse epidermis and absent staining in EP_1 knockout mice relative to syngeneic control mice. Immunohistochemistry was performed as described in the methods secion on mouse epidermis using the mouse monoclonal anti-EP_1 receptor antibody utilized in figure 5. **(A).** Non-irradiated control SKH1 hairless, albino mice exhibit a linear pattern of EP_1 immunolocalization in the upper epidermis just superficial to the stratum corneum (long arrow). **(B).** UVB-induced hyperplasia results in expansion of the epidermis as well as the granular layer and results in enhanced visualization of course, grainy cytoplasmic staining within the superficial suprabasal compartment (long arrows). Nuclear staining is noted by the short arrow. **(C).** Wild-type C57Bl/6 mice exhibit a similar pattern of immunolocalization noted in control SKH1 mouse epidermis (panel A). **(D).** The epidermis from C57Bl/6 mice with germline deletion of the EP_1 receptor lack significant staining by IHC.

Supplemental figure 2: Lot to lot variability in the performance of a commercial rabbit polyclonal anti-EP_1 receptor antibody. Immunoblots were performed on 10 μg of membrane preparation from HEK 293 cells over-expressing the human EP_1 receptor (HEK + EP_1), the human EP_3 receptor (HEK + EP_3), or empty vector control (HEK) cells essentially as described in the methods section. **(A).** Immunoblot performed for EP_1 receptor expression utilizing a rabbit polyclonal anti-EP_1 receptor antibody (Cayman Chemical, Ann Arbor, MI). This same lot of antibody reagent was used in a previously reported study [14]. Note the specific EP_1 receptor bands observed at approx 35 and 70 kDa and the non-specific band observed at approx 45 kDa. **(B).** Immunoblot using a subsequent lot number of the same commercial antibody source. Note that specific EP_1 receptor bands are largely absent, although the non-specific band at approx 45 kDa is still observed.