

Figure S1: 2,4-D produces epinasty in *Arabidopsis* leaves and accumulation of H_2O_2 mainly in vascular tissue. Leaves were treated with 23 mM 2,4-D, and the effect were analyzed after 72 h of treatment. A) 2,4-D induces leaf epinasty. B) Histochemical analysis of H_2O_2 production was carried out with DAB. Boxes show higher magnification of vascular tissue.

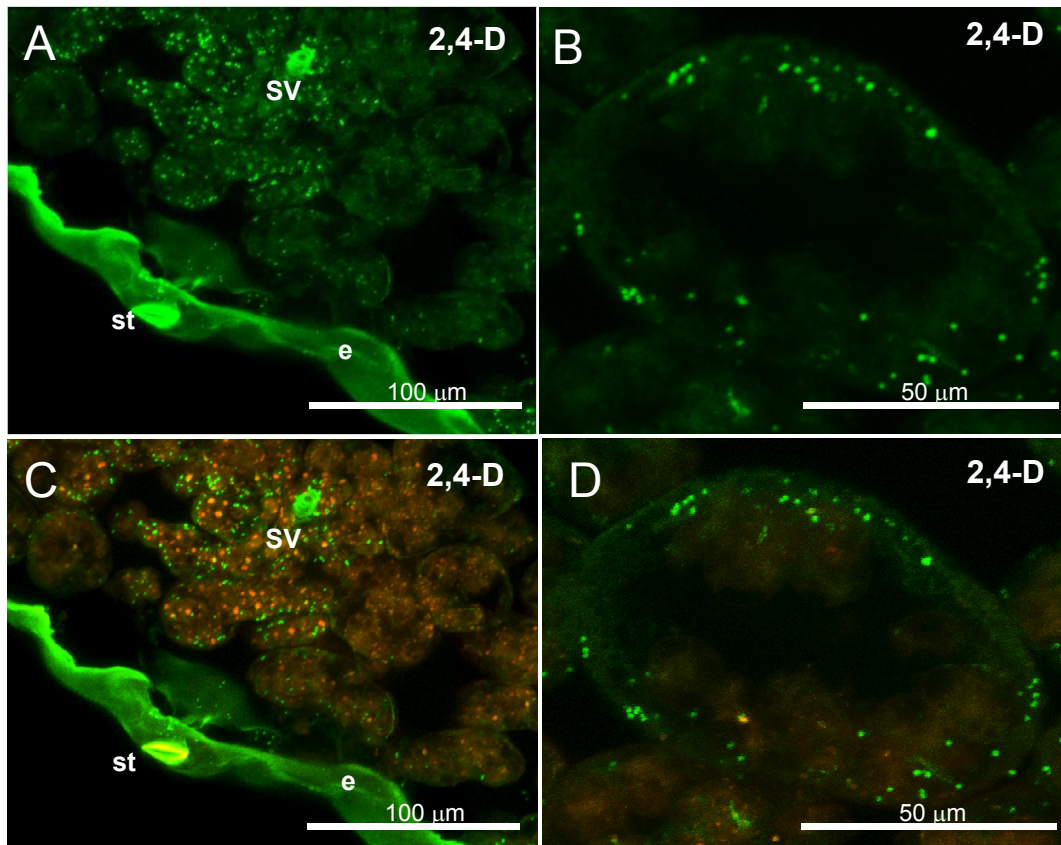


Figure S2. Imaging of O_2^- production by CLSM using DHE (Ex/Em: 450-490/520 nm, green) and chlorophyll autofluorescence (red) showing magnifications of mesophyll cells from 2,4-D treated plants. A) O_2^- -dependent DHE fluorescence associated to secondary veins (SV), stomata (st) and epidermis (e). B) High magnification of a mesophyll cell showing DHE associated to small organelles (mitochondria and peroxisomes). C and D show the merge of O_2^- -dependent DHE fluorescence (green) and the chlorophyll autofluorescence (red, Ex/Em: 633/680 nm).

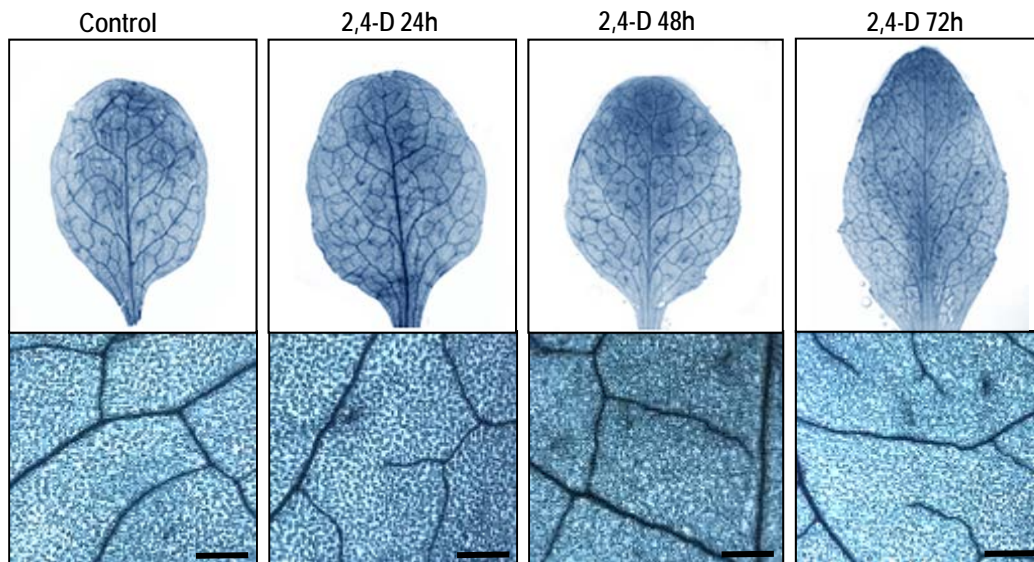


Figure S3. Histochemical staining with Trypan Blue from *Arabidopsis* leaves treated at different times with 2,4-D (23 mM). Leaves were stained with Trypan Blue as indicated in Materials and Methods. Bars= 200 μm.