# Expression profiling of ascorbic adic-related genes during toamto fruit development and ripening and in response to stress conditions

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## Supplementary Material

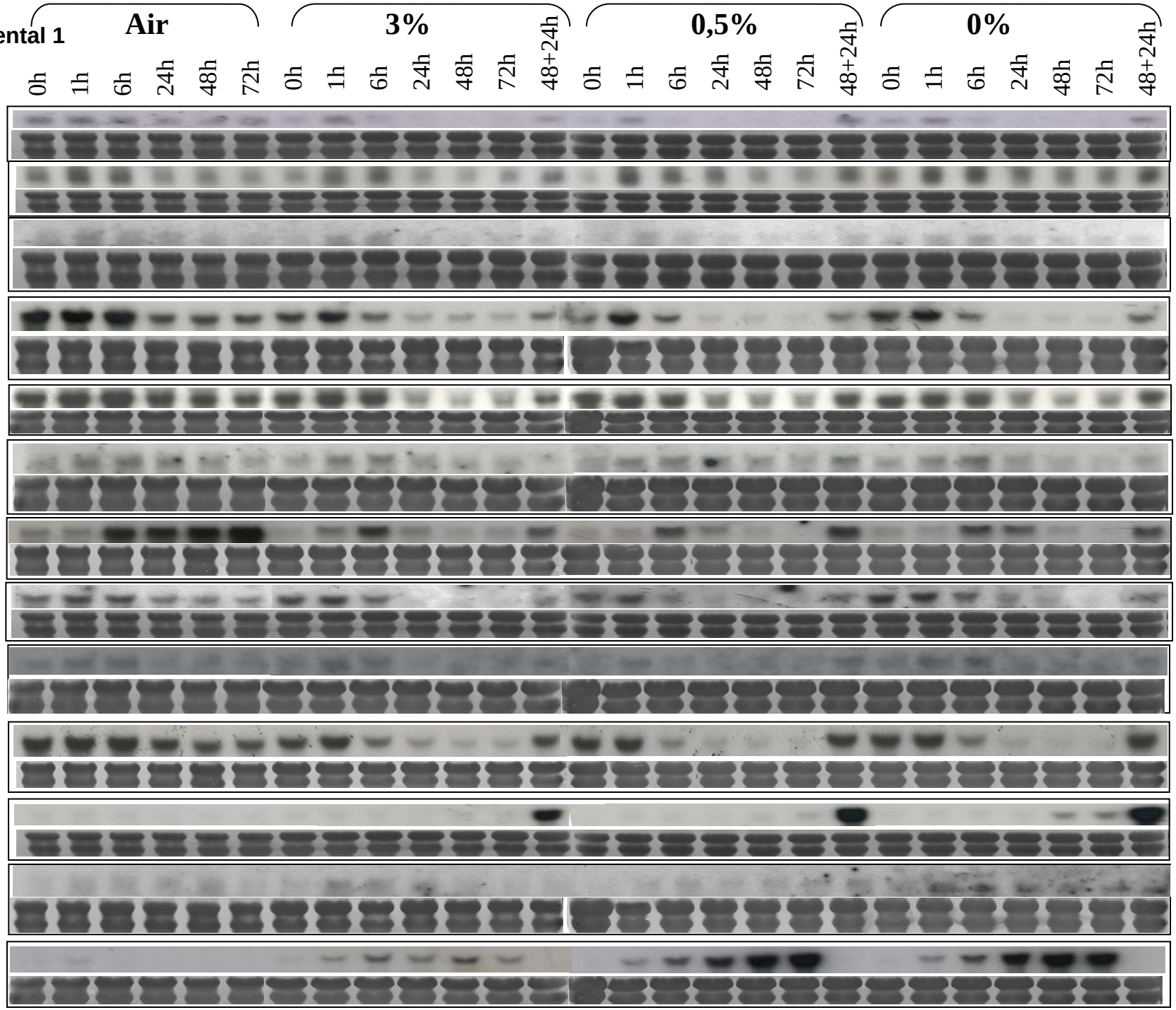
## Supplementary Figure Legends:

**Supplementary Figure S1. Time course expression of AA biosynthetic genes in response to low oxygen regimes.** Total RNA was isolated from mature green tomatoes held under low oxygen environments (0, 0,5, 3, 21% $O_2$) for 1h, 6h, 24h, 48h and 72h. RNA (~20 μg) was fractionated in denaturing agarose gels, transferred to Hybond N-membranes and hybridized with specific $^{32}$P-radiolabeled probes. Staining with 0.04% methylene blue was performed to verify the uniformity of RNA loading on the gel. All experiments were performed in triplicate.

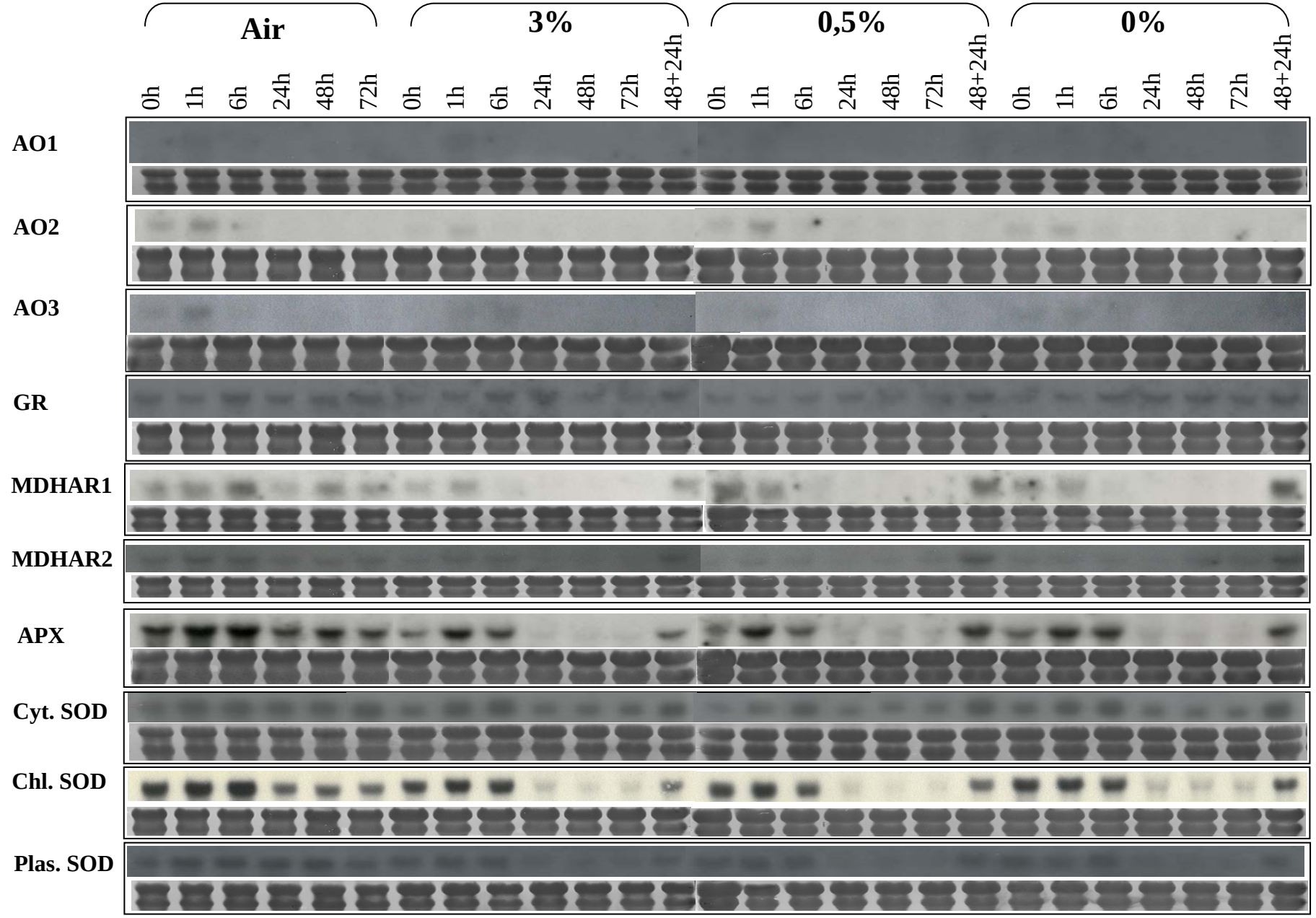
**Supplementary Figure S2. Time course expression of AA oxidation and recycling genes in response to low oxygen regimes.** Total RNA was isolated from mature green tomatoes held under low oxygen environments (0, 0,5, 3, 21% $O_2$) for 1h, 6h, 24h, 48h and 72h. RNA (~20 μg) was fractionated in denaturing agarose gels, transferred to Hybond N-membranes and hybridized with specific $^{32}$P-radiolabeled probes. Staining with 0.04% methylene blue was performed to verify the uniformity of RNA loading on the gel. All experiments were performed in triplicate.

**Supplementary Figure S3. *Cis*-acting regulatory promoter elements in ascorbate-related gene promoters.** The number of genes (occurrence frequency) in whose promoters each specific element is detected is shown in the graph. Bioinformatic sequence analysis was conducted on ascorbate-related gene promoters by using the PlantCARE program (http://bioinformatics.psb.ugent.be/webtools/plantcare/html/). The heat shock responsive element is seen predominantly in the ascorbate biosynthesis gene promoters while the gibberellin-responsive element is seen primarily in ascorbate oxidation and recycling gene promoters.

Supplemental 1



**Supplemental 2**



## Supplemental Figure 3

| | |
|---|---|
| **ABRE** | **ABA Responsive** |
| **ARE** | **Gibberellin Responsive** |
| **Box4** | **Light Responsive** |
| **Box-W1** | **Fungal Elicitor Responsive** |
| **G-BOX** | **Light Responsive** |
| **G-box** | **Light Responsive** |
| **GT1** | **Light Responsive** |
| **HSE** | **Heat Shock Responsive** |
| **Skn-1** | **Endosperm Expression** |
| **W-Box** | **Wound Responsive** |