

SUPPLEMENTAL FIGURE LEGENDS

Supplementary Fig. 1. Scheme of GA metabolic pathways.

Supplementary Fig. 2. Maximum likelihood phylogenetic tree based on comparison of *GA20ox*, *GA3ox* and *GA2ox* protein sequences from Arabidopsis and tomato. Branch lengths are proportional to sequence divergence. Bootstrap values above 50% are shown, whereas asterisks indicate statistical significance according to the weighted least-squares likelihood ratio test (**, $P < 0.01$; *, $P < 0.05$). The five genes characterized in this study are shown in bold type. Accession numbers corresponding to the sequences in the tree are the following: AtGA20ox1, X83379; AtGA20ox2, X83380; AtGA20ox3, X83381; AtGA20ox4, NM104778; AtGA20ox5, DQ056484; AtGA3ox1, L37126; AtGA3ox2, AF070937; AtGA3ox3, NM118289; AtGA3ox4, NM106682; AtGA2ox1, AJ132435; AtGA2ox2, AJ132436; AtGA2ox3, AJ322437; AtGA2ox4, NM103695; AtGA2ox6, NM100121; AtGA2ox7, AC079284; AtGA2ox8, AL021960; SIGA20ox1, AF049898; SIGA20ox2, AF049899; SIGA20ox3, AF049900; SIGA3ox1, AB010991; SIGA3ox2, AB010992; SIGA2ox1, EF441351; SIGA2ox2, EF441352; SIGA2ox3, EF441353; SIGA2ox4, EF441354; SIGA2ox5, EF441355.

Supplementary Fig. 3. HPLC radioactivity traces of products of [^{14}C]GA₁₂, [^{14}C]GA₉, [^{14}C]GA₄, [^{14}C]GA₅₃, [^{14}C]GA₂₀, and [^{14}C]GA₁, incubated with heterologous expression products of *SIGA2ox1*, -3, -4 and -5 after 2 h incubation at 30°C.

Supplementary Fig. 4. Alignment of amino acid sequences corresponding to GA 2-oxidases from groups I, II and III used to construct the phylogenetic tree of Fig. 5. ○, Fe²⁺ binding residues; ↑, 2-oxoglutarate binding residues; ●, amino acids conserved in groups I and II.