AGX1 encodes an alanine:glyoxylate aminotransferasethat catalyzes the transfer of the amino group of L-alanine to glyoxylate to produce pyruvate and glycine. Although glycine biosynthesis from L-alanine and glyoxylate is one of three pathways that produce glycine, it is the major pathway when cells are grown on non-fermentable carbon sources and is repressed when cells are grown on glucose. Cells disrupted for the other two pathways of glycine biosynthesisare able to grow on ethanol but require glycine supplementation when grown on glucose.Agx1p has sequence and structural similarity to plant and mammalian AGTs, including the human peroxisomal alanine:glyoxylate aminotransferasewhich causes primary hyperoxaluria type 1when mistargeted to the mitochondria. The agx1 mutation is functionally complemented by the human gene, and disease-associated mutations decrease the functionality of the human protein in yeast.