ERG11 encodes lanosterol 14-alpha-demethylase, an enzyme in the cytochrome P450 family that catalyzes the C-14 demethylation of lanosterol to form 4,4'-dimethyl cholesta-8,14,24-triene-3-beta-ol, a step in ergosterol biosynthesis. The erg11 null mutant requires ergosterol and cannot grow aerobically. Expression of the wheat CYP51 gene complements the erg11 null phenotype. A mutation in ERG3 can suppress the erg11 null phenotype, and combination of an erg11 mutation with a mutation that reduces heme levelssuppresses the sterol auxotrophy of an erg25 disruption; ERG3 and ERG25 encode enzymes that act downstream of Erg11p in ergosterol biosynthesis. Lanosterol 14-alpha-demethylase is the main target of azole antifungal componds such as fluconazole and ketoconazole in fungi including S. cerevisiae and Candida albicans; the drugs act by interacting with the heme iron. Overexpression of ERG11 causes resistance to azole antifungals.