ERG2 encodes C-8 sterol isomerase, an enzyme that catalyzes the isomerization of the delta-8 double bond to the delta-7 position in an intermedate in ergosterol biosynthesis. The erg2 null mutant has been reported to be viable; erg2 null mutant cells are ergosterol auxotrophs, accumulate aberrant sterols, and show a competitive growth disadvantage compared to wild type cells. The immunosuppressant drug SR 31747 causes yeast cells to accumulate the same aberrant sterols seen in erg2 mutants, and overproduction of Erg2p causes resistance to SR 31747. Erg2p also binds a class of drugs known as sigma ligands, as does a related protein from guinea pig liver. Expression of ERG2 increases several fold upon ergosterol depletion by starvation or SR 31747 treatment. Production of the human or murine emopamil-binding protein, or a related Arabidopsis protein, restores the ability of erg2 mutants to convert delta-8 sterols to delta-7 isomers.