URA4 encodes dihydroorotase, an enzyme involved in the de novo synthesis of pyrimidine ribonucleotides. Ura4p catalyzes the third step in this pathway, the conversion of ureidosuccinic acid to dihydroorotate. Loss of Ura4p activity leads to an accumulation of ureidosuccinic acidand a lack of cell growth unless uracil or uridine is added to the media.Uracil starvation or increased levels of the pyrimidine biosynthesis pathway intermediate dihydoorotic acidcan induce URA4 expression three fold. This regulation is mediated by the transcriptional activator Ppr1p, which binds to the UASURA sitein the promoters of URA1, URA3, and URA4. DNA-bound Ppr1p is transcriptionally inactive, but the addition of DHO converts Ppr1p to an active state that interacts with RNA polymerase II, leading to increased expression of the URA genes.