SUA7 encodes yeast TFIIB, a general transcription factor required for the initiation of transcription by RNA polymerase II. Sua7p is essential for viability, and cannot be replaced by human TFIIB. The roles of TFIIB and other general transcription factors in basal transcription have been studied extensively in yeast and other eukaryotes, and are reviewed in 10 and 11. Briefly, the TATA binding proteinbinds TATA DNA, and TFIIB binds to the TBP-DNA complex. TFIIB binding is required for an RNA polymerase II-TFIIF complex to associate with TBP-DNA; TFIIB forms a bridge between the TBP-DNA complex and the polymerase. One cold-sensitive sua7 mutation, E62K, supports complex formation but is severely defective in transcription, suggesting another role for yeast TFIIB in addition to assembling the transcription complex. Other non-null sua7 mutations alter transcriptional start site selection. A region unique to yeast TFIIB has been identified at the N-terminus of Sua7p; mutations in the yeast-specific region alter transcription in vivo.