SPT8 encodes a subunit of SAGA, a histone acetyltransferase and transcriptional coactivator complex that regulates transcription of a subset of RNA polymerase II-dependent genes. At some SAGA-dependent promoters, Spt8p helps to mediate recruitment of the general transcription machinery and thus positively regulates transcription. In addition, Spt8p negatively affects basal expression of some promoters by preventing SAGA interaction with the transcription machinery. Spt8p does not appear to have a role in the cell independent of its functions in the SAGA complex.Spt8p, along with Spt3p, form one class of SAGA subunits whose role is to control the TATA box binding protein-TATA interaction at the promoter. Evidence suggests that the positive and negative functions of Spt8p in transcription are mediated through the general transcription factor TFIIA. Photocrosslinking studies of pre-initiation complexesindicate that Spt8p is in close proximity with TFIIA and TBP. Spt8p can interact with TBPand appears to compete with TFIIA for binding to TBP. Under conditions of basal transcription, this competition may prevent optimal expression, while under activated conditions, the competition is averted, perhaps through a conformational change in Spt8p or TFIIA that enables them both to bind TBP and stimulate transcription. SPT8 was originally identified in a genetic screen for mutations that suppress Ty or solo Delta insertions in the upstream regions of the HIS4 and LYS2 genes. spt8 mutants display phenotypes similar to those of spt3 and spt7 mutants: suppression of Ty and Delta insertion mutations, failure to sporulate, and altered initiation of Ty transcription. Null mutations in SPT8 are suppressed by some spt3 mutations, a result consistent with functional overlap of Spt8p and Spt3p in SAGA. Cloning of SPT8 revealed that it encodes a protein that is very acidic, particularly in the N-terminal region where 49 of the first 76 amino acids are aspartic or glutamic acid. Spt8p also contains a single WD40 repeat, a motif found in a number of proteins including the beta subunits of heterotrimeric G proteins.The association of Spt8p with SAGA is dependent on its interaction with a carboxy terminal region of Spt7p. Cells contain an altered form of SAGA, referred to as SLIKor SALSA, which is also involved in transcription activation. This complex lacks Spt8p and contains a truncated form of Spt7p.Characterized subunits of the SAGA complex include: Hfi1p, Ada2p, Ngg1p, Spt20p, Gcn5p, Spt3p, Spt7p, Spt8p, Tra1p, Taf5p, Taf6p, Taf9p, Taf10p, Taf12p, Ubp8p, and Sgf11p.