UME6is a key transcriptional regulator of early meiotic genes, such as SPO11, SPO13, and IME2. UME6 is required for their repression during mitosis and its destruction during meiosis is required for their meiotic induction. This C6 zinc cluster DNA binding protein provides target specificity by binding to the URS1 sequence elementthat is located upstream of many early meiosis-specific genes. During mitosis, Ume6p recruits Sin3p and Rpd3p, subunits of a histone deacetylase complex, resulting in transcriptional repression of target genes by hypoacetylation of histone H3 and histone H4. Upon entry into meiosis, Ume6p becomes hyperphosphorylated by Rim11p and Mck1p. When phosphorylated, Ume6p interacts with the meiosis-specific transcriptional activator Ime1p. This association triggers Ume6p destruction by the APC/C-Cdc20 ubiquitin ligase, permitting early meiotic gene expression. In addition to the regulation of meiosis-specific genes, UME6 has been implicated in the transcriptional regulation of genes involved in arginine catabolism, peroxisomal function, and DNA repair genes. Like the early meiosis- specific genes, these genes contain URS1 sequence elements. Ume6p is a zinc cluster DNA binding protein that contains six conserved cysteines. It binds 2 Znions to form a binuclear zinc cluster. It, however, does not contain an activation domain.