Cks1p is a protein that associates with Cdc28p and is involved in cell cycle control. Classic genetic screens in yeast identified many of the genes involved in the cell cycle. One such gene, CDC28, was shown to be a highly conserved cyclin-dependent kinasethat plays a critical role in progression through the cell cycle. The CDKs are only catalytically active when associated with a cyclin. In addition to the cyclins, several other positive and negative regulators of CDKs have been identified. One such regulator is Cks1p, a small protein that physically associates with the activeform of Cdc28p and acts as its phosphoadaptor subunit. CKS1 was originally isolated as a high-copy suppressor of cdc28 mutations. Null mutations in CKS1 are lethal, and temperature-sensitive cks1 alleles cause pleiotropic cell cycle defects but have no effects on Cdc28/cyclin complex formation or activity. Thus, it was proposed that Cks1p may perform a more subtle role in regulation of Cdc28p, such as targeting the Cdc28/cyclin complex to its substrates. The crystal structure of a human CDK bound to human Cks1 showed that CDK-Cks1 binding occurs at a site adjacent to the catalytic site, which supports this model. It was shown that Cks1p binds Sic1p and mediates its cyclin-dependent docking to CDK, thus facilitating the multisite phosphorylation of Sic1p that directs it to SCF-mediated destruction at the onset of S phase. CKS1 homologs have also been identified in pombeand Xenopus; the human, yeast, and Xenopus proteins share over 50% identity over a central domain. In addition, the human and pombe homologs can complement a cks1 null mutation in S. cerevisiae, and the human proteins bind to both human and yeast Cdc28 7. An excellent comprehensive review about the yeast cell cycle can be found in \"Molecular and Cellular Biology of the Yeast Saccharomyces\" 13.