CLN2 encodes a G1 cyclin involved in regulation of the cell cycle. Progression through the cell cycle is a carefully regulated process that is conserved throughout eukaryotes. Periodic activation of cyclin-dependent kinasesare required for this process; the critical CDK involved in cell cycle progression in yeast is Cdc28p. Cyclins are the regulatory subunits that activate CDKs at the appropriate time in the cell cycle; they were named for their cyclical accumulation during particular phases of the cell cycle. Distinct CDK-cyclin complexes are required for progression through different stages of the cell cycle. CLN1, CLN2, and CLN3 encode the yeast cyclins involved in the G1 to S phase transition. CLN1 and CLN2 are closely related genes with overlapping functions; both are expressed in late G1 phase when they associate with Cdc28p to activate its kinase activity. Accumulation of CLN1 and CLN2 mRNA in late G1 is dependent on two transcription factor complexes, MBFand SBF, which bind to MCB and SCB promoter elements, respectively. In addition, Cln3p has been shown to activate CLN1 and CLN2 transcription while the G2 cyclins Clb1p, Clb2p, Clb3p, and Clb4p inhibit it. Pheromone-induced cell cycle arrest is caused by the inhibition of the Cdc28p-Cln1p and Cdc28p-Cln2p complexes by the Far1 protein. An excellent review by Lew et al. describes cell cycle control in S. cerevisiae in detail.