ADR1 encodes a transcriptional activator involved in the expression of genes that are regulated by glucose repression. Adr1p was first identified as a transcription factor mediating expression of the alcohol dehydrogenase gene ADH2, but it is now known to also activate genes involved glucose fermentation, glycerol metabolism, fatty acid utilization, and peroxisome biogenesis. Adr1p binds as a monomer to two half-sitesof the palindromic UAS1 element in the promoters of these genes. Overexpression or deletion of ADR1 strongly deregulates the glucose response of Adr1p target genes.The Adr1p DNA binding domainconsists of two Cys2His2 zinc fingers and an N-terminal proximal accessory region, which provides additional DNA contacts required for high-affinity binding. Adr1p also contains four transcriptional activation domainsthat are functionally redundant and interact with transcription factors such as Sua7p, TFIID, Ada2p, and Gcn5p.Chromatin modification is required for and affected by Adr1p binding; loss of histone deacetylase activity allows Adr1p to bind promoters under repressing conditions, and Adr1p has been shown to mediate nucleosome repositioning in the ADH2 promoter. The protein kinase Snf1p positively regulates Adr1p binding in the absence of glucose while the type 1 protein phosphatasecomplex Glc7p/Reg1p inhibits the ability of Adr1p to bind DNA in the presence of glucose. The PP1 complex also affects ADR1 transcription levels and Adr1p activity through post-translational modification. Direct phosphorylation by protein kinases, such as cAMP-dependent protein kinase, influences Adr1p expression and function as well.