

**F301****Transcriptional Control of *Saccharomyces cerevisiae* *ADH1* Gene by Autonomously Replicating Sequence Binding Factor 1**

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*Saccharomyces cerevisiae* autonomously replicating sequence binding factor 1 (ABF1) is a multifunctional protein which is involved in transcriptional activation and repression as well as in DNA replication. *ADH1* gene encoding alcohol dehydrogenase 1 contains two ABF1 consensus binding sites, one is in the promoter region and the other is in the coding region. To examine the effect of ABF1 on the expression of *ADH1* gene, we constructed the *ADH-lacZ* fusions. Both ABF1 binding sites were truned out to be a transcriptional activator on the basis that deletions and mutations of these sites decreased the transcriptional activity. ABF1 binding site also acted in an orientation-independent manner when the synthetic ABF1 binding site was inserted into the yeast *CYC1* gene lacking its transcriptional activation region. Gel mobility shift assay showed that ABF1 bound to both ABF1 binding site of the promoter and coding regions. In glycerol medium, the activation fold by ABF1 was higher than that in glucose medium. We therefore suggest that ABF1 transactivates the *ADH1* gene through its binding sites in both and coding regions.

**F302****Isolation and Nucleotide Sequence Analysis of Coat Protein Gene from TMV Tomato Strain**

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Tobacco Mosaic Virus (TMV) tomato strain was isolated from *Lycopersicon esculentum* MILL. in Korea and identified by electron microscopy observation. The virion was purified and the viral proteins were analyzed by SDS-PAGE. As the result of SDS-PAGE, the coat protein (CP) of TMV tomato strain was showed slightly larger in molecular weight than that of TMV common strain. Viral RNA was isolated from purified TMV particles and cDNA was synthesized by RT-PCR. Purified cDNA fragment was subcloned into pBluescript II SK- and subject to sequencing analysis. We sequenced 680 nucleotides from the insert of clone p1571 which was consist of the complete codons of the viral coat protein gene (474 nucleotides) and 3' untranslated region. The nucleotides of CP encoding cDNA of the TMV pepper strain was 6 nucleotides less than that of TMV common strain. CP gene of TMV tomato strain was showed 70% maiximum homology against that of TMV common strain in the nucleotide level and 72% maximum homology in amino acids level.