F025

The Effect of Cancer/Testis Antigen Gene CAGE on Cell Adhesion and Motility

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Previously we identified a novel cancer/testis antigen gene CAGE by screening cDNA expression libraries of human testis and gastric cancer cell lines with sera of patients with gastric cancers. CAGE was widely expressed in various cancer tissues and cancer cell lines, but not in normal tissues, except testis The induction of CAGE by tetracycline enhanced the invasiveness and motility of HeLa cells Cell adhesion to fibronectin and collagen type IV was increased by CAGE overexpression. This increase in cell adhesion and motility was accompanied by an increased cell growth Stable transfection of CAGE into mouse L929 cells not only enhanced invasiveness and motility of mouse L929 cells, but also cell growth The ROS formation is closely related with various cellular activities, including cellular proliferation, apoptosis, and motility. We found that overexpression of CAGE resulted in enhanced catalase activity and displayed ROS scavenging activity. This ROS scavenging effect was accompanied by activation of Akt and p38 MAPK Taken together, enhanced adhesion and motility by CAGE is closely related with its oncogenic potential and ROS scavenging effect.

F026

The Study about Functional Domain of SipB N-terminal 160 Amino Acid

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It has been known that SipB, one of invasion proteins encoded in *Salmonella* pathogenisity island 1 (SPI-1), is secreted outside cell and localized on outermembrane However, a functional domain essential to surface localization of SipB is not investigated yet In this study, it was shown that only the first ~ 160 amino acid of SipB N-terminal sequence was directed on outermembrane as like naive SipB and also the fragment could direct the recombinant reporter proteins to outermembrane The deletion plasmids (containing only 30, 72, 100, 120 and 140 amino acids from N-terminal) showed that the 72 ~ 100 amino acids fragment of SipB was indispensable to the localization to outer membrane Proteinase K sensitivity and immunofluorescence assay indicated that SipB was not incorporated into outermembrane but displayed bacterial surface

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F027

Double Deletion of Heat Shock Protein Genes, *SSA1* and *SSA2*, Affects the *S. cerevisiae* Morphogenesis

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Previous we have identified that the heat shock proteins, Ssa1 and Ssa2, were associated with yeast cell wall integrity by differential cell wall proteome analysis using cell wall defective α-COP mutant In order to confirm the involvement of Ssa1 and Ssa2 in cell wall integrity, we performed gene deletion and subsequent phenotype analysis Deletion of both *SSA1* and *SSA2* genes in Σ background haploid strains showed several defects in cell wall related phenotypes such as adhesion growth, invasive growth, butanol induced pseudohyphal growth and the flocculation activity These results indicated that Ssa1 and Ssa2 play a crucial role in yeast morphogenesis.

F028

Construction of an Auxotrophic Mutant of *Streptomyces exfoliatus* SMF13 Defective in L-arginine Biosynthesis

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Streptomyces exfoliatus SMF13 have studied as a improtant strain which produce the secondary metabolite Argininosuccinate lyase reversibly cleave the argininosuccinate to form free arginine and fumarate In this study, The argH encoding argininosuccinate lyase was disrupted by PCR-targeting system. The strategy for PCR - targeting for mutagenesis of *S exfoliatus* SMF13 is to replace a chromosomal sequence by a selectable marker An arginine auxotrophic mutant was obtained from *S. exfoliatus* SMF13 and could not synthesize arginine by the lack of active argininosuccinate lyase. Biochemical and genetic studies on the arginine-requiring auxotrophs derived from a strain were carried out The purpose of this study is to analyze relation of ArgH with secondary metabolite production From this exeperiment, we tried producing of modified secondary metabolites using this stram