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Establishment of Epstein-Barr Virus-Infected Lymphoblastoid Cell Lines from Koreans

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We have established a total of 18 Epstein-Barr virus-infected lymphoblastoid cell lines(LCLs) from korean stomach cancer or leukemia patients and characterized them in terms of latent infection of EBV and growth properties in culture. FACS analyses indicated all of the lines are of B cell lineage and express B cell activation markers including CD23, LFA-1 and LFA-3. The presence of latently infected EBV in the lines were confirmed by PCR for the EBNA-1 gene, and immunoblottings for EBNA-1, EBNA-2, and LMP-1. Treatment of the lines with a strong tumor promoter, TPA, induced the lytic infection cycle as evidenced by immunoblotting for a component of early antigen-diffuse complex. The requirements of a high serum concentration and a high initial cell density for growth in culture are consistent with that these lines are just growth-transformed, not oncogenically transformed. The LCLs we established should be useful to initiate a systematic molecular study for EBV spread in Korean population.

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Direct Cloning and Expression of Full Length cDNA and the N-lobe DNA Fragment of Human Lactoferrin in *Escherichia coli*

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Human lactoferrin (hLf) is an iron-binding protein, which has broad-spectrum of antimicrobial property. It was reported that the hLf protein has a bilobal structure with a high degree of homology between the C and N terminal halves. To study and compare the possible biological role of the N-lobe of the lactoferrin (hLfN) with mature human lactoferrin, we cloned the full length cDNA (2.2 Kb) and the DNA fragment containing the N-lobe of human lactoferrin gene by polymerase chain reaction (PCR) from the human breast cDNA library (phLf7 and phLf5, respectively). Both of the DNA fregments were subcloned to the expression vector to express them as fused proteins of MalE:hLf and MalE:hLfN, respectively. The fused proteins were analyzed by SDS-PAGE. The mature form and N-lobe of lactoferrin were partially purified by the protease (factor Xa) digestion from the crude extract of *E. coli*. The purified mature lactoferrin (hLf) and N-lobe of lactoferrin (hLfN) showed molecular weight of 78KD and 30KD, respectively. The biological activities of those protein are now understudied.