



Construction and expression of a fusion protein consisting anti-HBsAg antibody fragment Fab and interferon-a in *E. coli*

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Abstract

AIM: To construct an expression vector for anti-HBsAg antibody Fab fragment and interferon-aA (IFN-aA) fusion protein in *E. coli*.

METHODS: With PCR and molecular clone techniques, we amplified the gene fragment of IFN-aA with corresponding endonuclease sites

and artificial linker at 5', 3' termini, and then formed pHS/IFN-aA by recombining it within the vector in correct endonuclease sites, choosing the positive clone to transform into *E. coli* and introduced by IPTG to express the fusion protein.

RESULTS: Enzymic hydrolysis and DNA sequence measurement confirmed that human gene of IFN-aA was correctly cloned to the vector and could express fusion protein in *E. coli*.

CONCLUSION: The success in construction and expression of a fusion protein makes it possible to carry out further studies on its purification and targeted polypeptide therapy to HB virus.

Key words: Interferon-alpha; Immunoglobulin fragments; Viral fusion proteins; Hepatitis B virus; Polymerase chain reaction; *Escherichia coli*

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