

### Rapid purification system for His-tagged protein in a cell-free protein synthesis system

김태완<sup>1</sup>, 오인석<sup>1</sup>, 김정원<sup>1</sup>, 최차용<sup>1,2</sup>, 김동명<sup>3,\*</sup>

<sup>1</sup>서울대학교 화학생물공학부;

<sup>2</sup>서울대학교 생물화학공학협동과정;

<sup>3</sup>충남대학교 정밀공업화학과

(dmkim@cnu.ac.kr\*)

We present a rapid protein expression and purification method in a cell-free system. Overall process is a single step that is isolated His-tagged proteins during cell-free synthesis from a batch reaction. However, a higher proportion of other proteins may also bind to immobilized metal-ion affinity chromatography (IMAC) resin. We described the use of pre-treated S30 extract with same resin and washing buffer with a low concentration of imidazole(30 mM) for the removal of contaminants. The results document that it should be possible to purify with a higher purity and to overcome the above problems. Our method may allow a faster and more convenient approach to study of High-throughput technology compared to classical in vivo system.