

Histag Two Phase Purification System

Metal ion-free purification of recombinant proteins fused to His-tag by aqueous Two Phase Separation System

Description

Polyhistidine tags (His-tag) are the most widely used affinity tags. For structural studies, more than 60% of the proteins produced include this tag. Purification of his-tagged proteins is based on the use of chelated metal ions as affinity ligands, which are immobilized on Ion Metal Affinity Chromatography (IMAC). However, HISTAG/IMAC purification method may show several problems with metalloproteins, e.g. native metals can be lost or changed during purification processes. In order to avoid this problem and preserve the active configuration of proteins Biomedal developed this new, rapid and easy-to-handle method for protein purification based on the use of an aqueous two-phase system. The method relies on the control of preferential partitioning of polyhistidine peptide to one of the two phase components.

Applications

- Rapid, easy, scalable and direct purification of recombinant His-tagged proteins for laboratories and biotech industries
- Reduction of cellular contaminants from IMAC-purified proteins, by IMAC/HTPS tandem purification processes
- Purification of metalloproteins in their active form

Advantages

- Quick method, separation can be completed within a few minutes, minimizing the effects of proteases
- Easy-to-handle and inexpensive protein purification process
- Scalable method, no special equipment required
- Mild conditions for the separation of labile proteins

Licensing Opportunity

- Free of metal ions and imidazol
- Optimum performance in downstream purification processes
- Ideal complement to conventional solid resins, improving purity of His-tagged proteins purified by IMAC solid supports

Development Stage

The method is ready-to-market, scalable and samples are available. The proof of concept has been established with several proteins, e.g. Cytochrome C.

Patent Situation

Titel: Procedure for the Separation of Tagged Polypeptides

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Technology Offer

Biomedal offers an exclusive license to interested companies.

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