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A Geno Technology, Inc. (USA) brand name

Immobilized Heparin

(Cat. # 786-842)

INTRODUCTION

G-Biosciences Immobilized Heparin is a ready-to-use purification resin for a wide range of proteins. The resin consists of 6% cross-linked agarose covalently coupled to heparin through amide bonds. The coupling chemistry used generates a highly stable purification resin that is stable most commonly used buffers and denaturants.

Heparin is a linear glycosaminoglycan composed of equimolar quantites of glucosamine and glucuronic acid, alternatively linked by α(1→4) glycosidic bonds. A number of its hydroxyl groups are esterified with sulfuric acid moieties and the molecule has a single reducing sugar terminus.

Due to its structure and biochemical role, Heparin is able to bind a number of proteins, enzymes and polycationic organic compounds. The binding is either ionically or more specific protein-ligand or enzyme-inhibitor (or enzyme-activator) interactions.

Several classes of proteins can bind to heparin, including:

1. **Coagulation Factors**: ATIII, Factors IX, VII, XI, XII and XIIa
2. **Lipoprotein Lipases**: By ionic interactions
3. **Lipoproteins**: LDL, VLDL, VLDL apoprotein, HDL
4. **Growth Hormones**
5. **Growth Factors**: FGF, ECGF
6. **DNA- & RNA- Related Enzymes**: Polymerases, nucleases, endonucleases
7. **Enzymes**: Including collagenase, hyaluronidase, lysozyme, proteases

ITEM(S) SUPPLIED (Cat. # 786-842)

Description	Size
Immobilized Heparin	5ml resin

STORAGE CONDITIONS

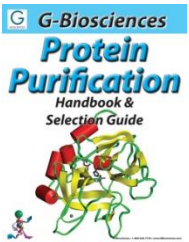
Shipped at ambient temperature. Store at 4°C, do not freeze.

GENERAL PROTOCOL

1. Add an appropriate volume of Immobilized Heparin to a suitable column.
   NOTE: *The capacity varies from protein to protein, but is typically 0.2-2mg protein per ml resin.*
2. Equilibrate the resin with 3-5 column volumes (CV) of sample buffer. For example, 1X PBS or 10mM Tris-HCL at PH7.5 with 150mM NaCl.
3. Apply the sample to the column and allow to pass through under gravity. Collect the flow through for analysis.
4. Wash the column with sample buffer until the absorbance at 280nm is the same as the sample buffer.
5. Elute the protein(s) of interest with sample buffer supplemented with 1.5-2M NaCl.
   NOTE: *In the case of multiple proteins binding to the column, elute with a linear or stepwise gradient ranging from 0.15-2M NaCl.*
   NOTE: *Elution with 1-10mg/ml heparin in sample buffer may selectively elute some proteins.*
6. Regenerate the column by passing 2-3CV 8M urea, 1.5M NaCl in PBS, followed by 3-5 CV sample buffer.
7. Store the column at 4°C with 0.02% sodium azide as a preservative.

RELATED PRODUCTS

Download our Protein Purification Handbook



http://info.gbiosciences.com/complete-protein-purification-handbook

For other related products, visit our website at www.GBiosciences.com or contact us.

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