

IminoBiotin Resin

Cat. No. L00272**Technical Manual No. TM0246****Version 07112010**

Index

1. Product Description
2. Operation
3. Purification Procedure
4. Related Products

1. Product Description

Genscript IminoBiotin Resin is an affinity chromatography medium designed for easy, single-step purification of avidin, streptavidin or their conjugates. The iminobiotin ligand is covalently coupled to 4% highly cross-linked agarose. The total binding capacity of IminoBiotin Resin is greater than 12 mg streptavidin/ml settled resin. Table 1 lists the characteristics of IminoBiotin Resin.

Iminobiotin is the cyclic guanido analog of biotin that has a lower affinity constant for binding avidin, streptavidin. The Iminobiotin analog can be used in situations requiring mild dissociation of the avidin-biotin complex. Normally, disrupting an avidin-biotin interaction requires 6-8 M guanidine•HCl, pH 1.5, an environment that is often too harsh for proteins to maintain native structure or activity. Iminobiotin binds at pH values above 9.5 and elution is performed at pH 4.0.

Table 1. Characteristics of IminoBiotin Resin

Resin Volume	5 ml settled resin (10 ml 50% slurry)
Ligand	IminoBiotin
Total binding capacity	> 12 mg streptavidin/ml settled resin.
Matrix spherical	agarose, 4% cross-linked
Average particle size	90 μ m (45-165 μ m)
Storage solution	1X PBS containing 20% ethanol
Storage conditions	2-8 $^{\circ}$ C
Shelf life	18 months when stored unopened

2. Operation

Buffer Preparation

Water and chemicals used for buffer preparation should be of high purity. It is recommended filtering the buffers by passing them through a 0.45 μ m filter before use.

Binding/Wash Buffer: 50 mM sodium borate, 0.3 M NaCl, pH 11.0

Elution Buffer: 50 mM sodium acetate, pH 4.0

3. Purification Procedure

This procedure is optimized for a column of 0.5 ml bed volume. The volumes of the reagents can be scaled up or down according to the size of the column.

Sample Preparation

The sample should be adjusted to contain 0.3 M NaCl with pH between 9.5 and 11.

Packing of Column

1. Completely resuspend the resin and transfer 1 ml slurry to a new column, in which 1 ml Binding/Wash Buffer was added in advance.
2. Allow the resin to settle down and the buffer to drain from the column.
3. Add 5 ml Binding/Wash Buffer onto the column to equilibrate the resin with a flow speed of about 2ml/min.

Column Purification

1. Apply the sample onto the column with the flow speed of 1 ml/min.
2. Wash the column with 10 - 20 bed volumes of Binding/Wash Buffer with a flow speed of about 1ml/min.
3. Elute the bound target molecules by 10 - 20 bed volumes of the Elution Buffer with a flow speed of about 0.5 - 1ml/min.
4. Collect the elution fraction and immediately neutralize it with 1M NaOH to avoid loss of activity resulting from extended exposure to acidic pH.

4. Related Products

Cat. No.	Product Name
L00210	Protein A Resin
L00400	Ultra Protein A Resin
L00209	Protein G Resin
L00239	Protein L Resin
L00405	Chicken IgY Precipitating Resin
L00223	High Affinity Ni-Charged Resin
L00206	Glutathione Resin
L00353	Streptavidin Resin
L00207	GST Fusion Protein Purification Kit
L00208	Protein Expression and Purification kit
L00403	High-Affinity Iodoacetyl Resin
L00404	High-Affinity Antibody Purification Kit

For Research Use Only**GenScript USA Inc.**

860 Centennial Ave.,
Piscataway, NJ 08854

Tel: 732-885-9188, 732-885-9688

Fax: 732-210-0262, 732-885-5878

Email: product@genscript.com

Web: www.genscript.com