

# PURIFICATION BEADS

Affinity media - Tag-binding beads - Activated beads - Activated carriers  
Avidin beads - Antibody purification & immunoprecipitation products

**2009/10**



Animal sera & plasma / Antibodies / Antigens / Biochemicals / Bovine & other animal albumins / Bovine & other animal proteins / Flow cytometry conjugates / FRET conjugates / Glycobiology reagents / Liquid stable substrates / Molecular biology research products

Europa Bioproducts Ltd, 15-17 North Street, Wicken, Ely, Cambs, CB7 5XW  
Tel: 0044 (0)1353-721118, Fax: 0044 (0)1353-624589, [www.europa-bioproducts.com](http://www.europa-bioproducts.com)

---

---

## ■ TABLE OF CONTENTS

<b>Affinity Media</b> .....	<b>4</b>
Blue Beads .....	5
Gelatin Beads .....	5
Heparin Beads .....	6
<b>Tag-Binding Beads</b> .....	<b>7</b>
Nickel Beads .....	8
Glutathione Beads .....	9
<b>Activated Beads</b> .....	<b>10</b>
Epoxy Activated Beads .....	11
Divinyl Sulfone (DVS) Activated Beads .....	11
Divinyl Sulfone a (DVS-A) Activated Beads .....	12
<b>Immunology</b> .....	<b>13</b>
AdaTR Adjuvant .....	14
AdaTR Platinum Adjuvant .....	14
<b>Activated Carriers</b> .....	<b>15</b>
Maleimide-Activated BSA .....	16
Maleimide-Activated OvA .....	17
Maleimide-Activated KLH .....	18

---

<b>Antibody Purification .....</b>	<b>19</b>
Ig-Thio-Capture Beads.....	20
Protein G Beads .....	21
Protein A Beads.....	22
Protein g .....	23
Protein A.....	24
<b>Avidin Beads.....</b>	<b>25</b>
Biotin-Capture Beads (avidin column).....	26
Mono-Avidin Beads (avidin column).....	27
Imino-Biotin Beads.....	28
<b>Immuno Precipitation .....</b>	<b>29</b>
Anti-Rabbit Beads.....	30
Anti-Mouse Beads .....	31
Protein G Beads .....	32
Protein A Beads.....	32
<b>Protein Size-Markers .....</b>	<b>33</b>
Biotinilated Protein Size Markers .....	34
<b>■ Contact Us .....</b>	<b>35</b>

# AFFINITY MEDIA

## BLUE BEADS

Cat.: EU6028 (5/10/25 ml and bulk)

### Description

Blue Beads are primarily used for quick removal of albumins from protein-containing samples.

The Cibacron Blue F3GA dye used in this product acts as a versatile binding agent binding to both charged and non-charged site in various molecules.

Product was optimized for the removal of Bovine albumins while minimizing loss of other proteins present in sample.

### Specifications

Matrix: ..... Sepharose™ CL-4B  
Cibacron Blue density: ..... 0.8-1.1 mg/ml of gel  
Mean bead size: ..... 40 -165 µm  
Bead structure: ..... Highly cross-linked spherical agarose, 4%  
Max back pressure: ..... 0.3 MPa, 3 bar  
Max. flow rates: ..... 4 ml/min/cm<sup>2</sup>  
Recommended flow rate: ..... 1-3 ml/min/cm<sup>2</sup>  
Storage: ..... 4 °C in PBS pH 7.4 with Na<sub>3</sub>N 0.1% (w/v)

## GELATIN BEADS

Cat.: EU6025 (5/10/25 ml and bulk)

### Description

Gelatin affinity media is commonly used for the purification of various proteins, mainly serum proteins, by affinity chromatography.

Gelatin Beads are made with highly purified Bovine Gelatin and capable of purifying human fibronectin.

### Specifications

Matrix: ..... Sepharose™ CL-4B  
Gelatin density: ..... 2-3 mg/ml of gel  
Binding capacity: ..... ~1 mg of Fibronectin  
Mean bead size: ..... 40 -165 µm  
Bead structure: ..... Highly cross-linked spherical agarose, 4%  
Max back pressure: ..... 0.3 MPa, 3 bar  
Max. flow rates: ..... 4 ml/min/cm<sup>2</sup>  
Recommended flow rate: ..... 1-3 ml/min/cm<sup>2</sup>  
Storage: ..... 4 °C in PBS pH 7.4 with Na<sub>3</sub>N 0.1% (w/v)

## HEPARIN BEADS

Cat.: EU6024 (5/10/25 ml and bulk)

### Description

Heparin Beads are made by coupling 20-35 KD size Heparin extracted from Porcine intestinal mucosa (Type I) to Sepharose beads.

These beads are useful for isolating heparinbinding protein such as Antithrombin III, lipoproteins, various enzymes and DNA binding proteins.

### Specifications

Matrix: ..... Sepharose™ CL-4B  
Heparin density: ..... 0.7-1.2 mg/ml of 20-35 KD Heparin  
Thrombin binding capacity ..... minimum 0.7 mg/ml of beads  
Mean bead size: ..... 40 -165 µm  
Range of pH values allowed: ..... 3.0-11.0  
Bead structure: ..... Highly cross-linked spherical agarose, 4%  
Max back pressure: ..... 0.3 MPa, 3 bar  
Max. flow rates: ..... 4 ml/min/cm<sup>2</sup>  
Recommended flow rate: ..... 1-3 ml/min/cm<sup>2</sup>  
Storage: ..... 4°C in PBS pH 7.4, 0.3N NaCl  
..... added with 0.01% (w/v) Thimerosal

# TAG-BINDING BEADS

### NICKEL BEADS

Cat.: EU1018 (5/10/25 ml and bulk)

#### Description

Recombinant proteins tagged with 6-10 poly Histidines can be purified in one step by ion metal affinity chromatography (IMAC).

Our Nickel Beads are high quality Nickel affinity-resin product, that exhibit high capacity and good selectivity towards His-tagged proteins. Purification with our Nickel Beads may be done in a variety of formats, such as gravity-flow columns and small or large-scale batches.

The preferred purification strategy is to start by using the native purification conditions and only later on, if required, use denaturing conditions for proteins that are accumulated as inclusion bodies or in cases when the 6xHis purification tag is not exposed in the native form.

The amount of actual protein bound can vary with the type and size of protein. Reducing agents such as DTT (Dithiothreitol) and chelating agents such as EDTA (Ethylene diamine tetra acetic acid) and EGTA (Ethylene glycol-bis(beta-amino-ethyl ether)), may be used in the buffers employed in the extraction protocols, but not during the affinity purification itself. Gel filtration or dialysis is recommended procedures for removal of these agents.

#### Specifications

Matrix: ..... Sepharose CL-4B  
Activation method: ..... Oxiran.  
Chelating group: ..... Iminodiacetic acid  
Binding capacity: ..... ~6-9 mg pure (His) 6 -tagged protein  
..... (Mr ~ 49 000) per ml  
Mean bead size: ..... 40-165  $\mu$ m  
Bead structure: ..... Highly cross-linked spherical agarose, 4%  
Max back pressure: ..... 0.3 MPa, 3 bar  
Max. flow rates: ..... 4 ml/min/cm<sup>2</sup>  
Recommended flow rate: ..... 1-2 ml/min/cm<sup>2</sup>  
Stability of the matrix: ..... pH 2-11.  
Storage: ..... 4 °C in PBS pH 7.4 added  
..... with NaN<sub>3</sub> 0.1% (w/v)  
..... or 20% ethanol as preservatives

### GLUTATHIONE BEADS

Cat.: EU1005 (5/10/25 ml and bulk)

#### Description

Glutathione Beads are used for the purification of glutathione transferase (GST) tagged proteins, produced using various commercial expression vectors.

GST-fused proteins can be purified from bacterial lysates by one-step affinity purification.

Our Glutathione Beads is a state of the art affinity-resin product that consists of glutathione attached through sulfur to an epoxy-activated 4% cross-linked beaded agarose.

The use of the Glutathione Beads enables the purification of various GST-fused proteins, while maintaining mild, non-denaturing conditions throughout the purification process.

#### Specifications

Matrix: ..... Sepharose CL-4B  
Activation method: ..... Oxiran.  
Binding capacity: ..... 4-8 mg/ml recombinant GST.  
Bead size: ..... 40-165  $\mu\text{m}$   
Bead structure: ..... Highly cross-linked spherical agarose, 4%  
Max back pressure: ..... 0.3 MPa, 3 bar  
Max. flow rates: ..... 4 ml/min/cm<sup>2</sup>  
Recommended flow rate: ..... 1-2 ml/min/cm<sup>2</sup>  
Stability of the matrix: ..... pH 4-10.  
Storage: ..... 4°C in PBS pH 7.4  
..... added with NaN<sub>3</sub> 0.1% (w/v)

# ACTIVATED BEADS

### EPOXY ACTIVATED BEADS

---

Cat.: EU1004 (5/10/25 ml and bulk)

#### Description

The Epoxy-Activated Beads is a preactivated support that contains high density of epoxy groups used for immobilisation of various ligands. The preactivated support can be used to immobilize proteins, carbohydrates and various ligands via stable linkage to amino, thiol and hydroxyl groups.

Coupling to hydroxyls is favored at a higher pH of 11- 13, while Thiol-containing ligands are best coupled at pH 7.5-9.0.

#### Specifications

Matrix: ..... Sepharose CL-4B  
Active group: ..... Oxiran.  
Active group density: ..... 10–25  $\mu$ mole/ml  
Bead size: ..... 5-165  $\mu$ m  
Bead structure: ..... Highly cross-linked spherical agarose, 6%  
Max back pressure: ..... 0.3 MPa, 3 bar  
Max. flow rates: ..... 4 ml/min/cm<sup>2</sup>  
Recommended flow rate: ..... 1-2 ml/min/cm<sup>2</sup>  
Stability of the matrix: ..... pH 2-11.

### DIVINYLSULFONE (DVS) ACTIVATED BEADS

---

Cat.: EU1007 (5/10/25 ml and bulk)

#### Description

Divinyl Sulfone (DVS) Activated Beads are rigid Sepharose beads loaded with high density of reactive groups. The matrix is suitable for binding amino, or hydroxyl groups, present on biomolecules such as proteins and carbohydrates.

The DVS activated beads are stable for extended period of time when stored refrigerated and light-protected. Coupling reactions to biomolecules may be done between pH values of 8-10 pH.

#### Specifications

Matrix: ..... Sepharose CL-4B  
Activation method: ..... Divinyl Sulfone  
Binding capacity: ..... 2-4 mg Bovine serum albumin (BSA) per ml  
Bead size: ..... 40-165  $\mu$ m  
Bead structure: ..... Highly cross-linked spherical agarose, 4%  
Max back pressure: ..... 0.3 MPa, 3 bar  
Max. flow rates: ..... 15 ml/min/cm<sup>2</sup>  
Recommended flow rate: ..... 8-12 ml/min/ cm<sup>2</sup>  
Storage: ..... 4°C in DDW

### **DIVENYL SULFONE A (DVS-A) ACTIVATED BEADS**

---

Cat.: EU1002 (5/10/25 ml and bulk)

#### **Description**

Divinyl Sulfone - A (DVS-A) Activated Beads are rigid Sepharose beads loaded with high density of reactive groups.

The matrix is optimized for binding thiol groups, present on biomolecules such as proteins and peptides.

The DVS-A activated beads are stable for extended period of time when stored refrigerated and light-protected.

Coupling reactions to biomolecules may be done between pH values of 6-8 pH.

#### **Specifications**

Matrix:..... Sepharose CL-4B

Activation method:.....Divinyl Sulfone.

Binding capacity: ..... 1-1.5 mg 15 AA long peptide  
..... terminated with Cystein  
..... per ml of beads

Bead size:..... 40-165µm

Bead structure: .....Highly cross-linked spherical agarose, 4%

Max back pressure: ..... 0.3 MPa, 3 bar

Max. flow rates: ..... 15 ml/min/cm<sup>2</sup>

Recommended flow rate: ..... 8-12 ml/min/ cm<sup>2</sup>

Storage: ..... 4°C in DDW.

# IMMUNOLOGY

### ADATR ADJUVANT

Cat.: EU5007 (10/5x10/10x10 ml and bulk)

#### Description

AdaTR Adjuvant is a proprietary adjuvant mixture, formulated for the immunization of laboratory animals such as Mice and Rabbits.

Composition is guaranteed to minimize stress to the animals by minimizing inflammatory responses, while maintaining excellent humeral immune response to antigen, resulting with the induction of high affinity and high titer antibodies.

AdaTR Adjuvant is capable of forming stable water in oil type of emulsions, preferred for immunisation purposes.

#### Specifications

AdaTR Adjuvant contains several ingredients including:

[1] Squalene, a light, metabolizable oil, [2] Hexadecane (Cetane), a heavy alkane hydrocarbon, [3] proprietary Non-ionic detergent, [4] a novel nanoparticles Micelle stabilizers, [5] several additional proprietary compounds.

Please note: Antigens rich in surfactants or having Urea content >4M or DMSO >20% may interfere with the emulsifying capacity.

### ADATR PLATINUM ADJUVANT

Cat.: EU5009 (5/5x10/10x10 ml and bulk)

#### Description

AdaTR Platinum Adjuvant is a proprietary adjuvant mixture, formulated for the immunization of laboratory animals such as Mice and Rabbits.

Composition is guaranteed to minimise stress to the animals by minimizing inflammatory responses, while maintaining excellent humeral immune response to antigen, resulting with the induction of high affinity and high titer antibodies.

AdaTR Platinum Adjuvant is capable of forming stable water in oil type of emulsions preferred for immunization purposes.

#### Specifications

AdaTR Platinum Adjuvant contains several ingredients:

[1] Squalene, a light, metabolizable oil, [2] Hexadecane (Cetane), a heavy alkane hydrocarbon, [3] proprietary Non-ionic detergent, [4] a novel nanoparticles Micelle stabilizers, [5] several additional proprietary compounds.

Compared with AdaTR Adjuvant, AdaTR Platinum Adjuvant contains additional proprietary immunostimulators components.

Please note: Antigens rich in surfactants or having Urea content >4M or DMSO >20% may interfere with the emulsifying capacity.

# ACTIVATED CARRIERS

### **MALEIMIDE-ACTIVATED BSA**

---

Cat.: EU1025 (2/10 mg and bulk)

#### **Description**

Activated KLH and BSA are commonly used as protein carriers for haptens such as peptides in order to enable the immune response to small molecules.

In many cases KLH conjugate is used for the immunisation, while BSA conjugate is used in immunoassays of the resulting antibodies.

BSA conjugates are used in order to filter out the antibodies directed to the KLH.

However in some cases BSA or other proteins are preferred as carrier proteins because of a variety of other reasons.

Our Maleimide activated KLH and BSA are pre-activated with a heterobifunctional cross-linker (GMBS).

These activated proteins may be reacted with biomolecules that contain a free sulfhydryl groups, to form a stable thioether bond.

#### **Specifications**

Activation method: ..... GMBS  
Binding capacity: ..... ~2.5-4 mg of peptide  
..... (average MW of 1000-2500)  
.....per 2 mg BSA  
Protein concentration: ..... 4 mg/ml (0.5 ml)  
Storage buffer: ..... PBS pH 7.5  
Storage condition: ..... -20 °C

### **MALEIMIDE-ACTIVATED OVA**

---

Cat.: EU1026 (2/10 mg and bulk)

#### **Description**

Activated BSA and Ovalbumin (OVA), are commonly used as protein carriers for haptens, such as peptides in order to enable the immune response to small molecules.

In many cases KLH conjugate is used for the immunisation, while BSA or OVA conjugate is used in immunoassays of the resulting antibodies. OVA conjugates are used in order to filter out the antibodies directed to the KLH.

However in some cases OVA or other proteins are preferred as carrier proteins because of a variety of other reasons.

Our Maleimide activated OVA is preactivated with a heterobifunctional cross-linker (GMBS). These activated proteins may be reacted with biomolecules that contain a free sulfhydryl groups, to form a stable thioether bond.

#### **Specifications**

Activation method: .....GMBS  
Binding capacity: .....~2-4 mg of peptide  
.....(average MW of 1000-2500)  
.....per 2 mg OVA  
Protein concentration: .....4 mg/ml (0.5 ml)  
Storage buffer: .....PBS pH 7.5  
Storage condition: ..... -20°C

### **MALEIMIDE-ACTIVATED KLH**

---

Cat.: EU1027 (2/10 mg and bulk)

#### **Description**

Activated KLH and BSA are commonly used as protein carriers for haptens such as peptides, in order to enable the immune response to these small molecules. KLH is most popular for immunisation while BSA conjugate is used in immunoassays of the resulting antibodies in order to filter out the anti KLH response.

Our Maleimide activated KLH is pre-activated with a heterobifunctional cross-linker (GMBS). These activated proteins can be reacted with compounds that contain a free sulfhydryl group to form a stable thioether bond.

#### **Specifications**

Activation method: ..... GMBS  
Binding capacity: ..... ~2-4 mg of peptide  
..... (average MW of 1000-2500)  
..... per 2 mg KLH  
Protein concentration: ..... 4 mg/ml (0.5 ml)  
Storage buffer: ..... PBS pH 7.5  
Storage condition: ..... -20 °C

# ANTIBODY PURIFICATION

### IG-THIO-CAPTURE BEADS

---

Cat.: EU1015 (5/10/25 ml and bulk)

#### Description

Ig-Thio-Capture Beads adsorbent is a chemical based immunoabsorbent aimed for the purification of immunoglobulins. Ig-Thio-Capture Beads support is based on the ability of some proteins, especially immunoglobulins, to bind to an immobilized chemical ligand that contains a sulfone group in close proximity to a thioether.

The Ig-Thio-Capture Beads also termed thiophilic adsorption chromatography provide a low cost, efficient alternative to other antibody purification methods.

The purification with thiophilic gel is a simple, rapid, one step purification method for antibody purification from serum, ascites or tissue culture supernatant. In addition, the method exhibits good protein recovery with excellent preservation of antibody activity due to gentle elution conditions, which usually yield concentrated, essentially salt-free, highly purified immunoglobulins at near neutral pH.

The gel has a high binding capacity and it has a broad specificity toward immunoglobulins derived from various animal species irrespective of the type of immunoglobulin or the immunoglobulin subclass.

#### Specifications

Matrix: ..... Sepharose CL-4B  
Activation method: ..... Divinyl sulfone  
Chelating group: ..... Sulfone group in proximity to a thioether group  
Binding capacity: ..... ~8-12 mg IgG per ml of beads  
Mean bead size: ..... 40-165  $\mu$ m  
Bead structure: ..... Highly cross-linked spherical agarose, 6%  
Max back pressure: ..... 0.3 MPa, 3 bar  
Max. flow rates: ..... 4 ml/min/cm<sup>2</sup>  
Recommended flow rate: ..... 1-3 ml/min/cm<sup>2</sup>  
Stability of the matrix: ..... pH 3-13  
Storage: ..... 4 °C in PBS pH 7.4  
..... added with NaN<sub>3</sub> 0.1% (w/v)

### PROTEIN G BEADS

---

Cat.: EU1017 (1/5/10/25 ml and bulk)

#### Description

Protein G originated from Streptococci is a monomeric protein with a molecular weight of about 50,000 kDa. Protein G binds with high affinity to the Fc region of most classes and subclasses of immunoglobulins from Mouse, Rabbit, Goat and Human. Due to this binding ability, Protein G is commonly used in the purification and recovery of either polyclonal or monoclonal immunoglobulins.

Recombinant Protein-G used in our Protein G beads is a genetically engineered form of Protein-G. Non-essential regions have been removed while leaving the IgG binding sites intact.

The recombinant Protein G has been immobilised on Sepharose beads, using proprietary chemistry, in order to create a versatile product for both the purification of various mammalian immunoglobulins and for isolating immune complexes by immunoprecipitation (IP).

#### Specifications

Matrix: ..... Sepharose™ CL-4B  
Protein G density: ..... 3-4 mg/ml of gel  
Binding capacity: ..... ~4-8 mg rabbit IgG per ml of beads  
Mean bead size: ..... 40 -165 µm  
Bead structure: ..... Highly cross-linked spherical agarose, 4%  
Max back pressure: ..... 0.3 MPa, 3 bar  
Max. flow rates: ..... 4 ml/min/cm<sup>2</sup>  
Recommended flow rate: ..... 1-3 ml/min/cm<sup>2</sup>  
Stability of the matrix: ..... pH 2-11  
Storage: ..... 4 °C in PBS pH 7.4  
..... added with NaN<sub>3</sub> 0.1% (w/v)

### PROTEIN A BEADS

---

Cat.: EU1016 (1/5/10/25 ml and bulk)

#### Description

The origin of protein A is from the bacteria *Staphylococcus aureus*. Protein A is capable of binding most classes and subclasses of immunoglobulins from Goat, Rabbit, Mouse and Human.

Our Protein A beads are produced using genetically engineered form of Protein A. Nonessential regions have been removed while leaving the immunoglobulins binding sites intact.

The recombinant Protein A has been immobilized to Sepharose beads using proprietary chemistry, in order to create a high quality product for the affinity purification and immunoprecipitation of various mammalian immunoglobulins.

Protein A beads are being routinely used for the isolation of IgG from several species of mammals. The binding of Protein A to IgGs vary between animal species and between IgG subclasses within the same species. Major limitation of protein A lies with the weak binding it presents towards mouse IgG1-a common IgG subclass. Despite that, Protein A possesses useful properties that makes it a popular choice for the isolation of most types of IgGs. Protein A binds IgGs through the Fc region of the molecules leaving the Fab region available for binding the antigen.

Protein A Beads are commonly used for antibody purification and for the isolation of immune complexes by Immunoprecipitation (IP).

#### Specifications

Matrix: ..... Sepharose™ CL-4B  
Protein A density: ..... 2-4 mg/ml of resin  
Binding capacity: ..... ~4-8 mg rabbit IgG per ml of resin  
Mean bead size: ..... 40 -165 µm  
Bead structure: ..... Highly cross-linked spherical agarose, 4%  
Max back pressure: ..... 0.3 MPa, 3 bar  
Max. flow rate: ..... 4 ml/min/cm<sup>2</sup>  
Recommended flow rate: ..... 1-3 ml/min/cm<sup>2</sup>  
Stability of the matrix: ..... pH 2-11  
Storage: ..... 4 °C in PBS pH 7.4  
..... with NaN<sub>3</sub> 0.1% (w/v)

### PROTEIN G

Cat.: EU1042 (10/50/250 mg and bulk)

#### Description

Recombinant Protein G is a genetically engineered form of Protein-G. Non-essential regions have been removed while leaving the IgG binding sites intact.

Protein G has been extensively used for the isolation of IgG from several species of mammals. Although binding of Protein G to IgG's is not equivalent for all IgG subclasses, Protein G possesses properties that have made it a popular choice for antibody isolation.

Protein G binds immunoglobulins at the Fc region of leaving the Fab region free to bind the antigen. Hence, Protein G is extremely useful for isolating of immune complexes.

#### Specifications

Source: ..... Recombinant protein  
..... Molecular Weight 33 kd  
..... expressed in E. coli  
Purity: ..... > 90% by SDS-PAGE  
Spectroscopic analysis: ..... OD280nm/250nm=2.51  
LAL Pyrogenicity: ..... < 0.5 EU/mg Recombinant Protein G  
Composition: ..... Lyophilized white Powder  
..... 10.6 mg Recombinant Protein G  
..... 0.78 mg phosphate buffer salts  
Storage before reconstitution: ..... Store at 4 °C. Stable for two years.

### PROTEIN A

Cat.: EU1043 (10/50/250 mg and bulk)

#### Description

Recombinant Protein A used also in our Protein A beads is a genetically engineered form of Protein-A derived from *Staphylococcus aureus*. Non-essential regions have been modified while leaving the IgG binding sites intact.

Protein A is been used extensively used for the isolation of IgG from several species of mammals. The affinity of Protein A to IgG's is different between species and IgG subclasses within a given species. A major known limitation of protein A is its weak binding to Mouse IgG1– a major immunoglobulin subclass in Mice.

Despite its variable binding characteristics, Protein A is a popular choice for both antibodies binding in various assays and when coupled to beads, for Immunoprecipitation of antibody-antigen complexes.

Protein A binds specifically the Fc region of immunoglobulins leaving the Fab region free for binding the antigen. Hence, Protein A is extremely useful for isolating of immune complexes.

#### Specifications

Source:..... Recombinant protein, Molecular Weight 23.3 kd  
..... expressed in E. coli  
Purity: ..... > 90% by SDS-PAGE.  
Spectroscopic analysis:..... OD280nm/250nm=2.51  
LAL Pyrogenicity: ..... < 0.5 EU/mg Recombinant Protein A  
Composition:..... Lyophilized white Powder.  
..... 10.9mg Recombinant Protein A, 0.82 mg  
..... phosphate buffer salts.  
Storage before reconstitution: ..... Store at 4 °C.  
..... Product is stable under these  
..... Conditions for two years.

# AVIDIN BEADS

### **BIOTIN-CAPTURE BEADS (AVIDIN COLUMN)**

---

Cat.: EU1008 (1/5 ml and bulk)

#### **Description**

Our Biotin-Capture Beads contain modified Avidin that is immobilised on rigid, highly cross-linked beaded agarose possessing high chemical Stability. Our modified Avidin provides a substantial improvement over native Avidin. The high affinity to biotin is maintained, while background problems are minimized due to chemical modification on the protein.

The Biotin-Capture Beads has proven to be particularly useful in the isolation of antigens and nucleic acids by employing biotinylated antibodies, or nucleic acid probes respectively. Biotin-Capture Beads can be used in numerous additional affinity chromatography applications.

#### **Specifications**

Matrix: Sepharose .....CL-4B  
Type of Avidin bound to beads: ..... Modified Avidin  
Binding capacity: ..... 2-4 mg biotinilated BSA per ml of beads  
Bead size: ..... 40-165  $\mu\text{m}$   
Bead structure: .....Highly cross-linked spherical agarose, 4%  
Max back pressure: ..... 0.3 MPa, 3 bar  
Max. flow rates: ..... 4 ml/min/cm<sup>2</sup>  
Recommended flow rate: ..... 1-2 ml/min/cm<sup>2</sup>  
Stability of the matrix: .....pH 2-11  
Storage: ..... 4°C in PBS pH 7.4  
..... with NaN<sub>3</sub> 0.05% (w/v)

### **MONO-AVIDIN BEADS (AVIDIN COLUMN)**

---

Cat.: EU1009 (1/5 ml and bulk)

#### **Description**

The Mono-Avidin Beads enables mild affinity purification of biotinylated proteins, peptides and other ligands. The mono-avidin molecules immobilised on the beads have a much lower biotin-binding affinity than native avidin thus enabling dissociation of biotinylated molecules using free biotin molecules or low pH buffer. In addition, the Mono-Avidin Beads can be regenerated at least 10 times with no significant loss in binding capacity.

#### **Specifications**

Matrix: ..... Sepharose™ CL-4B  
Type of Avidin bound to beads: ..... Mono-Avidin  
Binding capacity: ..... 2-3 mg biotinylated BSA per ml of beads  
Bead size: ..... 40-140 µm  
Bead structure: ..... Highly cross-linked spherical agarose, 4%  
Max back pressure: ..... 0.3 MPa, 3 bar  
Max. flow rates: ..... 4 ml/min/cm<sup>2</sup>  
Recommended flow rate: ..... 1-2 ml/min/cm<sup>2</sup>  
Stability of the matrix: ..... pH 2-11.  
Storage: ..... 4°C in PBS pH 7.4 with NaN<sub>3</sub> 0.05% (w/v)

### IMINO-BIOTIN BEADS

---

Cat.: EU1011 (5/10/25 ml and bulk)

#### Description

The Imino-Biotin Beads enables mild affinity purification of various proteins belonging to the Avidins family. The Imino-Biotin molecules immobilized on the beads are capable of binding Avidins at neutral and basic pH and eluting in under acidic conditions.

The Imino-Biotin Beads can be regenerated at least 10 times with no significant loss in binding capacity.

#### Specifications

Matrix: ..... Sepharose™ CL-4B  
Type of coupling of  
Imino-Biotin to beads: ..... Epoxy  
Binding capacity: ..... 2-2.6 mg Avidin per ml of beads  
Bead size: ..... 40-140 µm  
Bead structure: ..... Highly cross-linked spherical agarose, 4%  
Max back pressure: ..... 0.3 MPa, 3 bar  
Max. flow rates: ..... 4 ml/min/cm<sup>2</sup>  
Recommended flow rate: ..... 1-2 ml/min/cm<sup>2</sup>  
Stability of the matrix: ..... pH 2-11.  
Storage: ..... 4°C in PBS pH 7.4 with NaN<sub>3</sub> 0.05% (w/v)

# IMMUNO PRECIPITATION

### **ANTI-RABBIT BEADS**

---

Cat.: EU1031 (5/10/25 ml and bulk)

#### **Description**

Goat Anti-Rabbit IgG (whole molecule) was affinity purified on Rabbit IgG affinity column using IgG isolated from pooled normal Rabbit sera. Eluted antibodies were further purified by Protein G column in order to separate IgGs from other classes of antibodies. Purified Antibodies were coupled to Sepharose Beads using propriety chemistry.

#### **Specifications**

Matrix:.....Sepharose™ CL-4B  
Coupling density:.....0.7-1.2 mg/ml of Goat anti Rabbit IgG  
Rabbit IgG binding capacity: ..... minimum 0.6 mg/ml of beads  
Mean bead size: ..... 40 -165 µm  
Range of pH values allowed: ..... 3.0-11.0  
Bead structure: .....Highly cross-linked spherical agarose, 4%  
Max back pressure: ..... 0.3 MPa, 3 bar  
Max. flow rates: ..... 4 ml/min/cm<sup>2</sup>  
Recommended flow rate: ..... 1-3 ml/min/cm<sup>2</sup>  
Storage: ..... 4°C in PBS pH 7.4, 0.3N NaCl  
..... with Azide 01% (w/v)

### **ANTI-MOUSE BEADS**

Cat.: EU1332 (5/10/25 ml and bulk)

#### **Description**

Goat Anti-Mouse IgG (whole molecule) was affinity purified on Mouse IgG affinity column using IgG isolated from pooled normal Mouse sera. Eluted antibodies were further purified by Protein G column in order to separate IgGs from other classes of antibodies. Purified Antibodies were coupled to Sepharose Beads using proprietary chemistry.

#### **Specifications**

Matrix: ..... Sepharose™ CL-4B  
Coupling density: .....0.7-1.2 mg/ml of Goat anti Mouse IgG  
Mouse IgG binding capacity: .....minimum 0.6 mg/ml of beads  
Mean bead size: ..... 40 -165 µm  
Range of pH values allowed:..... 3.0-11.0  
Bead structure: ..... Highly cross-linked spherical agarose, 4%  
Max back pressure: .....0.3 MPa, 3 bar  
Max. flow rates: ..... 4 ml/min/cm<sup>2</sup>  
Recommended flow rate: ..... 1-3 ml/min/cm<sup>2</sup>  
Storage: ..... 4°C in PBS pH 7.4, 0.3N NaCl  
.....added with 01% (w/v) Azide

### **PROTEIN G BEADS**

---

Cat.: EU1017 (1/5/10/25 ml and bulk)

**For details please see chapter antibody purification.**

### **PROTEIN A BEADS**

---

Cat.: EU1016 (1/5/10/25 ml and bulk)

**For details please see chapter antibody purification.**

# PROTEIN SIZE-MARKERS

### **BIOTINILATED PROTEIN SIZE MARKERS**

---

Cat.: EU1029 (0.2/0.5/1 ml and bulk)

#### **Description**

Our Biotinylated Protein Size-Markers enables detection of size markers through biotin. For example HRP-Streptavidin may be used for the detection of the marker bands on blot or on film. The proteins included in our Biotinylated Protein Size-Markers provide a suitable molecular mass range for most applications. Staining markers with Brilliant Blue R stain is possible. Protein bands are approximately equal in colour intensity.

#### **Specifications**

<b>Protein .....</b>	<b>MW (approximate)</b>
Myosin, porcine .....	200,000
β-Galactosidase, from E. coli .....	116,000
Phosphorylase b, from rabbit muscle .....	97,000
Albumin, bovine .....	66,000
Albumin, from chicken egg white (Ovalbumin) .....	45,000
Carbonic Anhydrase, from bovine erythrocytes .....	29,000

Storage buffer:..... PBS pH 7.5

Storage condition: ..... -20°C

## ■ CONTACT US

### Europa Bioproducts Ltd

15-17 North Street  
Wicken, Ely, Cambs  
CB7 5XW

Tel +44 (0)1353-721118  
(English and German)

Fax +44 (0)1353-624589

[info@europa-bioproducts.com](mailto:info@europa-bioproducts.com)

<http://www.europa-bioproducts.com>

### Distributors

#### Belgium and Netherlands

Immunosource  
Ruiterslaan 29  
2980 Halle-Zoersel (Belgium)  
Tel +32 3 385 36 85  
Fax +32 3 384 38 18  
[info@immunosource.com](mailto:info@immunosource.com)

#### Norway and Sweden

Reactionlab Sverige  
Box 16023  
S-750 16 Uppsala  
Sweden  
Tel +46 (0)18 14 90 00  
Fax +46 (0)18 14 90 10  
[info.sweden@reaction-lab.com](mailto:info.sweden@reaction-lab.com)

#### Finland

Reactionlab Finland Oy  
P.O. Box 120  
20521 Turku  
Finland  
Tel +358(0)2-4101146  
Fax +358-(0)2-4101123  
[info.finland@reaction-lab.com](mailto:info.finland@reaction-lab.com)

#### Denmark and Iceland

Reactionlab AS  
Vassingerodvej 91C  
3540 Lyngø  
Denmark  
Tel +45 (0)7027 9595  
Fax +45 (0)7027 9596  
[info.denmark@reaction-lab.com](mailto:info.denmark@reaction-lab.com)

Valkjärventie 7 B  
02130 Espoo  
Finland  
Tel +358(0)9 594822  
Fax +358(0)9 5022098



---

**Europa Bioproducts Ltd**

15-17 North Street  
Wicken, Ely, Cambs  
CB7 5XW

Tel 0044 (0)1353-721118 (English and German)  
Fax 0044 (0)1353-624589

[info@europa-bioproducts.com](mailto:info@europa-bioproducts.com)

<http://www.europa-bioproducts.com>

---