

AVB Sepharose High Performance

Product Information

Cat#No# AV-341C

Product Overview

AVB Sepharose High Performance is an affinity resin designed for the purification of adeno associated virus (AAV), Fast, one-step purification of adeno associated viruses of several subclasses:

One step purification of adeno associated viruses.

Affinity resin with high selectivity and low background binding.

Large surface area to give enhanced capacity.

Prepacked HiTrap columns available, for simple operation with a syringe, pump, or chromatographic system.

Description

AVB Sepharose High performance is an affinity resin with affinity for adeno associated viruses. It enables purification of adeno associated viruses in one step with high purity and excellent yields. It has proven affinity for adeno associated viruses from subclasses 1, 2, 3, and 5, but it is expected to have affinity for most of the other adeno associated virus subclasses. The ligand is a 14 kD fragment from a single chain antibody, expressed in yeast.

Characteristic

Efficient, industrial-scale purification of adeno-associated viruses (AAV) of several subclasses by affinity chromatography.

Reduced regulatory concerns (due to non-mammalian derived product) in the production of AAV for clinical applications.

High selectivity and excellent scalability.

Applications

When using AVB Sepharose High Performance the AAV can be applied directly from clarified AAV vector cell lysate. Conventional buffers (e.g., PBS, Tris, citrate) may be used for loading, washing, and elution. Virus binds to the column at around neutral pH and is typically eluted by lowering the pH, for example in the range of pH 2 to 5. Since AAV is sensitive to highly acidic conditions, it is important to minimize the exposure to low pH during elution. Therefore, collected elution fractions should be neutralized immediately.

AVB Sepharose High Performance

Maximum operating pressure

100-200 cm/h, 300 kPa, BioPilot 60/600 column, bed height 30 cm.

Ligand Coupling Method

Amide linkage

Matrix

Cross-linked agarose

Particle Size

24 µm-44 µm

Average particle size

~34 µm

Ligand

14 kD recombinant protein

Ligand density

Approx. 2.4 mg/ml of medium

Dynamic binding capacity

> 10¹² genecopies / mL

Recommended flow rate

100-200 cm/h, 300 kPa, BioPilot 60/600 column, bed height 30 cm.

Recommended column height

30 cm

Chemical stability

Stable to commonly used aqueous buffers.

Physical stability

The ligand is linked to the Sepharose High Performance base matrix via a stable amide bond.

AVB Sepharose High Performance

Storage

4 to 8°C, 20% Ethanol

Equilibration

Equilibration (3 times) with 200 µL of equilibration buffer (20 mM Tris-HCl, 0.5 M NaCl, pH 8.0) per well.

Cleaning-in-place

The recommended protocol comprises initial strip of the resin at low pH, and then subjecting the resin to NaOH of low concentration for cleaning.

Sanitization

PAB (120 mM phosphoric acid, 167 mM acetic acid, 2.2% v/v benzyl alcohol) is used for final sanitization of the resin.

Pack size

75 mL

Maximum flow velocity

200 cm/h

Wash buffer

20 mM Tris-HCl, 0.5 M NaCl, pH 8.0
