

POROS CaptureSelect™ AAVX PhyTip® Columns

PhyTip® Columns

This specification sheet provides details on CaptureSelect™ AAVX PhyTip® columns

PhyTip® columns are unique capture, purification and enrichment tools from Biotage designed for micro-volume protein sample preparation. PhyTip® columns are available for a variety of liquid handling platforms and contain specific affinity resins for application specific requirements.

CaptureSelect™ AAVX PhyTip® columns are packed with POROS CaptureSelect™ AAVX affinity resin for purification of adeno-associated virus vectors.

Samples for purification and enrichment must be clear and free from particulate matter. It is highly recommended to centrifuge samples and use the clear supernatant only, prior to use with PhyTip® columns.

PhyTip® columns are available in two formats, 200+ with a recommended maximum sample volume of 200 µL and 1000+ with a recommended maximum volume of 1000 µL. For each of the PhyTip® column formats there are several different resin volumes available. Each PhyTip® column has been designed for maximum efficiency of capture and elution of the specific biomolecule of interest when using the specified protocol. See below.



Shipping and Storage

Each pack of PhyTip® columns has been manufactured and qualified to the highest standards and shipped in retainer boxes that maintain the integrity of the specific affinity resin within each PhyTip® column. This product is shipped at ambient temperatures, but on receipt should be stored in a standard laboratory refrigerator between 4 and 8 °C.

- » Do NOT freeze or store frozen.
- » When not in use, keep the lid of the box closed and sealed, store in the refrigerator.
- » Do not allow affinity resin to dry out by extended storage in a dry environment.

CaptureSelect™ PhyTip® columns are shipped in a storage buffer containing glycerol. Interstitial storage buffer in the column may drip out during shipment or storage to form an opaque resin bed. The resin will still be hydrated in this state unless the bed has visibly shrunk. The resin has dried when the bed has visibly shrunk and only then is it recommended not to use the PhyTip® columns. If this occurs, please contact your regional sales representative.

Important Product Information

The packed column of the PhyTip® can cause pressure to build up within the tip. This internal pressure must be compensated for at each aspirate and dispense step. This is especially important when working with small volumes.

- » 1000+ format
 - » If you need to process a volume < 250 µL, add 230 µL to that volume.
 - » Example: A 200 µL volume should be programmed as 430 µL (200 + 230).
- » » 200+ format
 - » If you need to process a volume < 75 µL, add 40 µL.
 - » Example: A 10 µL volume should be programmed as 50 µL (10 + 40).

Prevent aspirating or dispensing air in the PhyTip® column by only mixing 95% of the volume within the well.

- » Example: Aspirate and dispense 950 µL of a 1000 µL sample
- Calibration tips can be requested free of charge from Biotage.

Purifying AAV

Biotage recommends processing samples with the following buffers (not supplied):

- » Equilibration Buffer – Phosphate Buffer solution pH 7.0–7.5 or Tris pH 7.0–8.0
- » Wash Buffer I – Phosphate Buffer solution pH 7.0–7.5 or Tris pH 7.0–8.0
- » Wash Buffer II (optional) – Saline solution. NOTE: no buffering capacity to ensure effective elution
- » Elution Buffer – 50–100 mM citric acid pH, 3.0 or 50–300 mM glycine pH 2.0–3.0
- » Neutralization Buffer. – Tris Buffer solution pH 9.0

Additives such as arginine and MgCl₂ can be used to optimize elution especially for AAV serotypes 8 and 9. Also Pluronic F-68 surfactant can be used in the equilibration, sample, and elution to prevent absorption of the sample at concentrations between 0.01%–0.1%.

1000+ CaptureSelect AAV PhyTip® Columns

A cycle consists of aspirate, pause 20 seconds, dispense, pause 20 seconds all while maintaining the end of the PhyTip® column at 1–2 mm above the bottom of the well.

Equilibrate

1000 µL of Equilibration buffer, passed over the resin bed for two cycles at a flow rate 500 µL/min.

Capture

500 µL sample captured by passing through the resin bed for four cycles at a flow rate of 500 µL/min.

Wash

1000 µL of PBS, passed over the resin bed for two cycles at a flow rate 500 µL/min.

Elute

Elute the protein into solution with a volume of three times the resin bed volume of elution buffer, passed over the resin bed for four cycles at a flow rate of 500µL/min.

Neutralize

Neutralize with 1M Tris pH 9.0 using a volume equal to ¼ of the elution volume. Mix.

200+ CaptureSelect AAV PhyTip® Columns

Equilibrate

200 µL of Equilibration buffer, passed over the resin bed for two cycles at a flow rate 250 µL/min.

Capture

200 µL sample captured by passing through the resin bed for four cycles at a flow rate of 500 µL per minute.

Wash

200 µL of PBS, passed over the resin bed for two cycles at a flow rate 500 µL/min.

Elute

Elute the protein into solution with a volume of three times the resin bed volume of elution buffer, passed over the resin bed for four cycles at a flow rate of 500 µL/min.

Neutralize

Neutralize with 1M Tris pH 9.0 using a volume equal to ¼ of the elution volume. Mix.

Ordering Information

For Ordering information please visit www.biotage.com

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CaptureSelect® is a trademark of Thermo Fisher Scientific.

EUROPE

Main Office: +46 18 565900
 Fax: +46 18 591922
 Order Tel: +46 18 565710
 Order Fax: +46 18 565705
 order@biotage.com
 Support Tel: +46 18 56 59 11
 Support Fax: + 46 18 56 57 11
 eu-1-pointsupport@biotage.com

NORTH & LATIN AMERICA

Main Office: +1 704 654 4900
 Toll Free: +1 800 446 4752
 Fax: +1 704 654 4917
 Order Tel: +1 800 446 4752
 Order Fax: +1 704 654 4917
 ordermailbox@biotage.com
 Support Tel: +1 800 446 4752
 us-1-pointsupport@biotage.com

JAPAN

Tel: +81 3 5627 3123
 Fax: +81 3 5627 3121
 jp_order@biotage.com
 jp-1-pointsupport@biotage.com

CHINA

Tel: +86 21 68162810
 Fax: +86 21 68162829
 cn_order@biotage.com
 cn-1-pointsupport@biotage.com

KOREA

Tel: +82 31 706 8500
 Fax: +82 31 706 8510
 korea_info@biotage.com
 kr-1-pointsupport@biotage.com

INDIA

Tel: +91 11 45653772
 india@biotage.com

Distributors in other regions are listed on www.biotage.com

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