

PureCube Glutathione Cartridge 1 mL & 5 mL

Product	Catalog No.	Package size
PureCube Glutathione Cartridge (1 x 1 mL)	32301	1 x 1 mL prepacked column
PureCube Glutathione Cartridge (5 x 1 mL)	32303	5 x 1 mL prepacked columns
PureCube Glutathione Cartridge (1 x 5 mL)	32305	1 x 5 mL prepacked column
PureCube Glutathione Cartridge (5 x 5 mL)	32307	5 x 5 mL prepacked columns

Product Description

The PureCube Glutathione Cartridge is a chromatography column prepacked with PureCube Glutathione Agarose. The column is stored in buffer containing 20% ethanol to prevent microbial growth. The PureCube Glutathione Cartridge is available in two sizes, 1 mL bed volume and 5 mL bed volume (dimensions given in Product Specifications). Both column sizes exhibit excellent chemical resistance to most commonly used reagents and the End Plugs include standard connections compatible with common chromatography instruments (such as ÄKTA). The 5 mL column has two layers of mesh (coarse and fine) at one end to give excellent flow distribution. The void volume in each End Plug is minimal, because the fluid is introduced through a narrow flow path (i.e. 1 mm hole).

Product Specifications

Parameter	PureCube Glutathione Cartridge, 1 mL	PureCube Glutathione Cartridge, 5 mL
Functional Group	L-Glutathione, reduced	L-Glutathione, reduced
Spacer Length	12 C-atoms	12 C-atoms
Format	1 mL	5 mL
Dimensions [mm]	6.2 x 50	11 x 80
Column Body Material	Polypropylene	Acrylate
End Plug Material	Polypropylene	Polypropylene
Inlet/Outlet	10-32 UNF female thread	10-32 UNF female thread
Matrix	7.5% highly cross-linked agarose	7.5% highly cross-linked agarose
Particle Diameter	40 µm	40 µm
Protein Binding Capacity*	<10 mg	<50 mg
Max. Flow Rate	6 mL/min	6 mL/min
Recommended Flow Rate**	0.5-2.0 mL/min	0.5-2.0 mL/min
Recommended Operational Pressure	Up to 5 bar (72 psi)	Up to 3 bar (42 psi)
pH Stability	3-12	3-12

* Protein binding capacity can vary for different proteins

** Dynamic binding capacity strongly correlates with the flow rate and other parameters such as protein size and buffer conditions

Affinity Resin

PureCube Glutathione Agarose was developed for the affinity purification of glutathione-S-transferase (GST) fusion proteins. This affinity chromatography resin is based on BioWorks Workbeads, consisting of 7.5% cross-linked agarose. The material is highly porous to allow for optimal protein interaction. Cross-linked agarose is also physically very stable, making it suitable for purification processes under low pressure with variable flow rates. The matrix agarose resin is very homogeneous in size with a medium particle diameter of 40 µm, yielding a high degree of reproducibility between individual purification runs. Reduced L-glutathione is coupled to the agarose to generate an affinity matrix with highest binding capacity for GST fusion proteins.

PureCube Glutathione Agarose can be used for batch purification, as well as for low pressure column purification, and is compatible with all prokaryotic and eukaryotic expression systems. Because the purification method depends on correctly folded GST protein, only native conditions can be used.

Protein Binding Capacity

PureCube Glutathione Cartridges have a binding capacity of <10 mg/mL resin as determined by purification of glutathione-S-transferase from *E.coli* cleared lysates, and quantified via spectrophotometry. It should be considered that the dynamic binding capacity strongly correlates with flow rate and other parameters such as protein size and buffer conditions. It is recommended to use the lowest flow rate possible to achieve highest binding capacity.

Compatibility

For cleaning purposes, PureCube Glutathione Agarose is very stable and can resist the following conditions in most situations:

All commonly used aqueous buffers, from pH 3 – 12, e.g., 1 M sodium acetate, pH 4.0, or 6 M guanidine-hydrochloride, organic solvents (e.g., 70% (v/v) ethanol), 1% (w/v) SDS, 0.1 M NaOH, 0.1 M HCl.

Shipping and Storage

Parameter	PureCube Glutathione Cartridge, 1 mL	PureCube Glutathione Cartridge, 5 mL
Shipment Temperature	Ambient temperature	Ambient temperature
Storage Buffer	20% ethanol, pH 6.5	20% ethanol, pH 6.5
Storage Temperature	2-8 °C	2-8 °C

Additional Information

For protein purification and cleaning protocols, including protocols for packing chromatography columns, please visit our webpage at www.cube-biotech.com/protocols. For purification of GST-tagged proteins from dilute solutions, we recommend using PureCube Glutathione MagBeads. For affinity purification of His-tagged, rho1D4-tagged or strep[®]-tagged proteins, Cube Biotech offers dedicated agarose resins, magnetic beads and pre-packed cartridges. Also available are a range of ultrapure detergents and buffers for the extraction and purification of proteins. See www.cube-biotech.com/products for details.

Disclaimer: Our products are intended for molecular biology applications. These products are not intended for the diagnosis, prevention, or treatment of a disease.

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