i3 DMC^{PrA} 1.0 mL

Protein A Membrane Adsorber

BIOTECH

INTENDED USE

The i3 DMC^{PrA} 1.0 mL is a ready-to-use membrane adsorber for rapid affinity purification of antibodies. Its Protein A functionalized membrane efficiently captures immunoglobulin G (IgG), monoclonal antibodies (mAbs), and other Fc-containing molecules with high specificity for general laboratory applications and early-stage research and development.

With its electrically driven elution, the DMC technology enables purification without the use of low-pH elution buffer and delivers samples in a physiological buffer suitable for direct developability assays. The device can be operated with any conventional liquid chromatography (LC) system.

APPLICATIONS

Mild affinity purification of pH-sensitive antibody modalities

No buffer exchange

Antibody discovery

FEATURES

High molecular quality without pH-induced aggregation or structural alterations

Maximum yield from low-abundance sample with recovery rates over 95%

Simplified sample processing without buffer exchange

Faster workflows with cycle times under 10 minutes

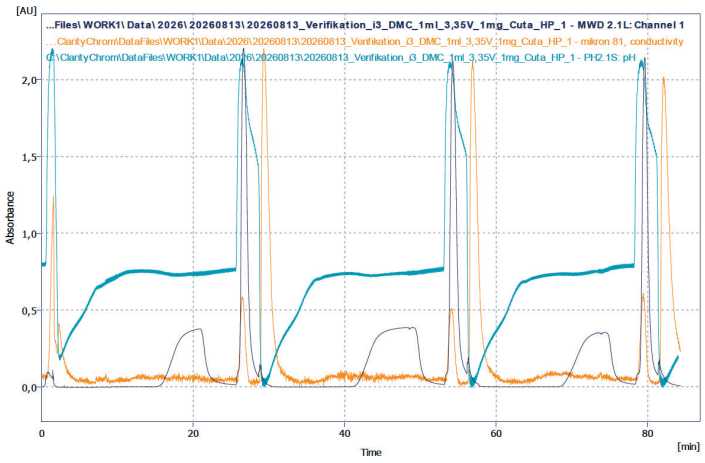
BIOTECH

TECHNICAL DATA

Membrane material	Cellulose
Ligand	Protein A
Pore size	0.2 µm
Membrane dimensions	76.5 x 32.5 mm
Membrane thickness	0.625 mm ± 30µm | 0.025" ± 0.0012"
Bed volume	1.0 mL
Dynamic binding capacity (DBC) per unit[1]	Up to 30 mg polyclonal IgG
Elution volume	8 mL (8 MV)
Recommended operating flow rate	3.0 mL/min (3 MV/min)
Max. operating pressure	Up to 5 bar | 72.5 psi
Recommended elution voltage	+ 3.35 V
Temperature stability	4°C-RT | 39.2°F – RT
Cleaning-in-place (CIP)	Up to 10x with 0.1M NaOH, short-time incubation
Connectors	PEEK Fingertight-Fittings, 10-32 thread
Autoclavability	Non autoclavable
Storage	20% ethanol/water 4°C | 39.2°F
Dimensions	L: 130.0 mm | 5.1" W: 86.0 mm | 3.4" H: 28.0 mm I 1.1"

[1]Determined in 1:50 diluted 1x PBS (containing 2.74 mM NaCl, 54 µM KCl, 0.24 mM phosphate buffer, pH 7.4)

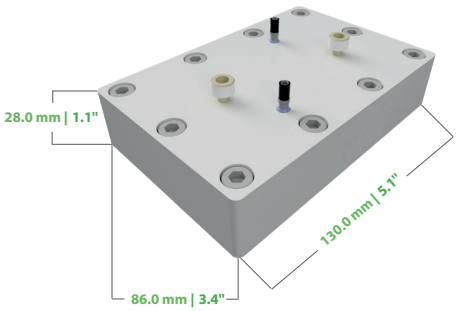
PERFORMANCE



blue: UV **orange: Conductivity** **petrol: pH**

Figure 1: Performance of i3 DMC^{PrA} 1.0 mL in three consecutive capture and release experiments.
30 mg polyclonal IgG (cutaquig®) was loaded onto i3 DMC^{PrA} 1.0 mL membrane adsorber resulting in a breakthrough peak caused by the overload.
After washing, elution was performed in working solution by applying +3.35 V for 3 min.
Recovery rates of > 93% were obtained with high reproducibility.

DIMENSIONS (mm/inch)



ORDER INFORMATION & COMPLEMENTARY PARTS

i3 DMC^{PrA} 1.0 mL, Protein A Membrane
DMC402 (art. no.)

i3 DMC$_{Control}$ Smart Control Unit
DMC101 (art. no.)

Packaging unit (DMC402)
1 pc.

Packaging unit (DMC101)
1 pc.

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