Purilogics™
By Donaldson

Purexa™ PrA Maxi Column
Membrane Chromatography Product User Manual

INTRODUCTION
Purilogics® Protein A membrane chromatography column, Purexa™ PrA Maxi Column, is *NOT* intended for use in clinical or diagnostic procedures and is intended for research purposes only.

SPECIFICATION

Membrane Bed Volume	0.2 mL
Pore Size	0.45µm
Housing Material	Polypropylene
Maximum System Pressure	0.5 MPa
Typical hIgG DBC10% at 10 CV/min	40 mg/mL in 1XPBS, pH 7.4; capacity may vary when different types of antibodies are used
Flow Rate Range	0.5 - 6.0 mL/min
Recommended Flow Rate	1.0 - 3.0 mL/min
Loading Buffer Example	1XPBS, pH=7.4
Washing Buffer Example	20mM Sodium Acetate or Sodiumn Citrate pH 5.5; or Deionized water
Elution Buffer Example	20-100 mM Citric Acid, Sodium Acetate, Phosphoric Acid, or Glycine pH=3.0
Cleaning Buffer Example	0.1 M NaOH followed by 20mM Tris, pH 7.0, then DI as needed

MATERIALS SUPPLIED
The Purexa PrA Maxi Column, is supplied with two caps and a luer lock connector.

PRIMING
Prime the columns by setting the FPLC flow rate at 2 mL/min. Connect the column to the inlet side by using wet-to-wet connection. Invert the column to allow bubbles to purge. Use wet-to-wet connection to connect the downstream side. Reverse the flow for a few mL and then resume downflow. Allow flow to continue until the UV has stabilized. The column is now ready for use.

TYPICAL BIND-AND-ELUTE PROCESS
Optimal conditions will be target specific and will also be contingent on the level and type of impurities present in feed. Below are suggested starting conditions. If initial conditions provide low yield or an undesirable level of impurities a gradient protocol is recommended to determine the minimum effective concentration for the wash step.

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Equilibration: Equilibrate the column with 1XPBS, pH=7.4 after priming.
Loading: Load the column with antibody solution and process. (NOTE: capacity may vary when different types of antibodies are used)
Washing: Load the column with 4 mL washing buffer, for a rinse step and process. (NOTE: Additional washing steps may be needed to achieve optimum purity)
Elution: Elute the antibody from the column using preferred elution buffer

CLEANING AND STORAGE

For Clean-in-Place (CIP), we recommend running 0.1 M NaOH through the column until UV signal stabilizes followed by additional equilibration buffer to return to loading condition. A CIP cycle is recommended between each bind and elute cycle and at the end of each purification run.

To store, run deionized water through the device until conductivity reaches 0.0 mS/cm. We then recommend filling the column with 20% ethanol solution, capping the inlet and outlet, and storing in a qualified sealable bag between 2-8°C and protected from sunlight.

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