Purilogics™
By Donaldson

Purexa™ OdT

Membrane Chromatography Products

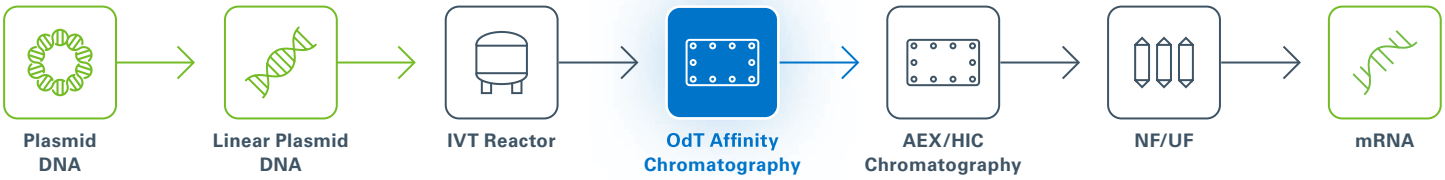
for mRNA Purification

Purexa OdT is a rapid mRNA purification tool that utilizes affinity membrane adsorber technologies. This chromatography product offers up to 10x productivity compared to traditional resins.

How Purexa OdT Works

Purexa OdT can successfully separate target mRNA species regardless of size. Productivity is enhanced with faster flow rates while providing high purity eluates.

Purexa OdT paired with our AEX and HIC columns allows for a seamless purification process to isolate mRNA.



Superior productivity: up to 10x with Purexa OdT

+ Higher dynamic binding capacity
+ Faster cycle times
+ Consistent performance through linear scale-up
+ Easier setup and breakdown

Recommended buffers for mRNA purification with Purexa OdT

+ **Running Buffer:** 50 mM Sodium Phosphate + 250 mM NaCl, pH 7.0
+ **Wash Buffer:** 50 mM Sodium Phosphate, pH 7.0
+ **Elution Conditions:** Deionized water or 20 mM Tris pH 7.0
+ **Cleaning Solution:** 0.1 M NaOH

Higher Performance at Higher Speeds

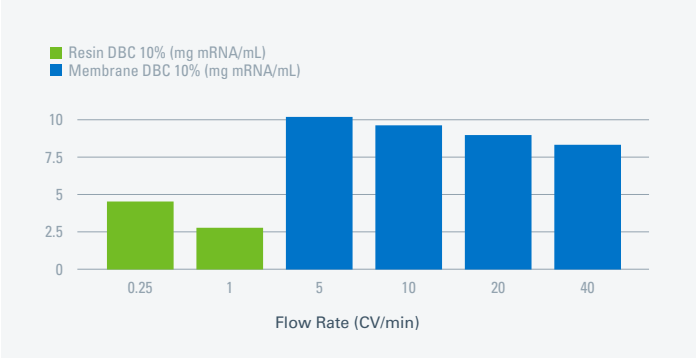


Figure 1. Running with a 800 nt mRNA sample, Purexa OdT still has more than twice the dynamic bonding capacity (DBC) while operating at 20x the flow rate compared to resins.

Increase Productivity with Purexa OdT

As shown in Figures 1-4, Purexa OdT membrane chromatography provides high binding capacity and short residual time, regardless of the size of the molecule, resulting in up to 10x faster processing than with resin chromatography.

Consistency No Matter the Size

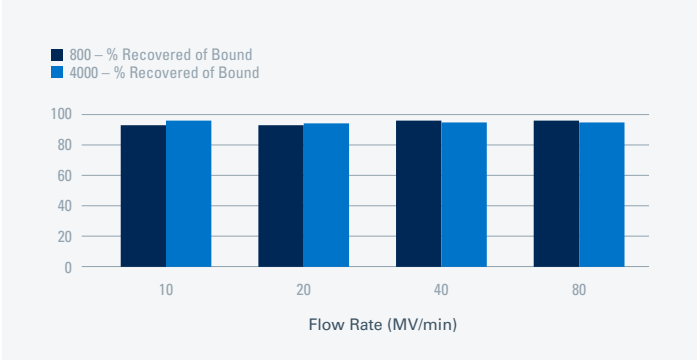


Figure 2. The performance of Purexa OdT is not affected by the size of the mRNA molecules. No decrease in recovery is observed with an increase in nucleotide base pairs or with speed (flow rate).

Multiple Cycle Consistency

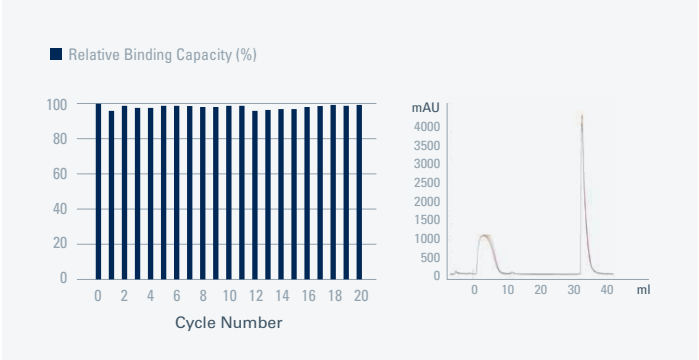


Figure 3. Purexa OdT can be reused over numerous cycles with no noticeable decrease in performance.

Scalable Consistency of Membrane

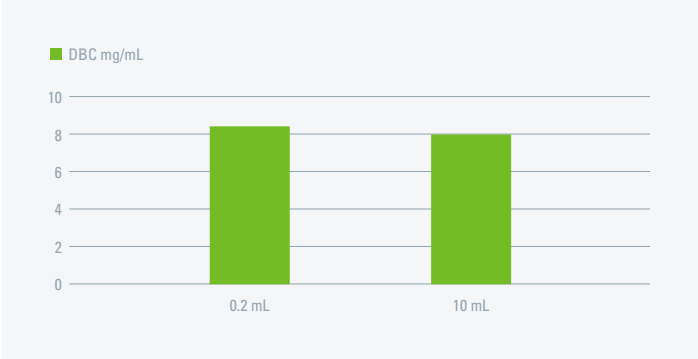


Figure 4. Dynamic binding capacity remains consistent, no matter the form factor or volume of cassette, across scale-up Purexa OdT products, including 1, 10, and 50 mg mRNA (4k nt) capacity units, which are currently available, and 250 mg capacity and greater units, which are coming soon.

Purexa OdT **0.45 µm** (other pore sizes and larger volumes to come)

	Volume	Suggested Flow Rate	Binding per Unit: mRNA*
Column	Maxi: 0.22 µL	10 mL/min	0.5-2 mg
Cassette	2 ml	10 mL/min	5 mg
	10 ml	50 mL/min	25 mg

* Higher conductivity can lead to higher binding capacity.

Interested in purification solutions for mRNA, pDNA, proteins, antibodies, and more?

Contact us at purilogicsinfo@donaldson.com

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