

SiaRich Pan-Specific Lectenz® Affinity Columns

Catalog #	Description	Size	Specificity	Binding capacity
SC0005-1ML	Pan-Specific Lectenz® Affinity Column	1 ml	α2,3, α2,6, α2,8-linked sialic acids	300 µg fetuin or equivalent per column
SC0005-5X1ML	Pan-Specific Lectenz® Affinity Column	5 x 1 ml		

Upon arrival, store the products at 4°C refrigerator.

This product is for research use only and not for resale or for any use in the manufacture of a therapeutic or for any diagnostic purpose.

Product Description

Lectenz® are a novel class of **lectin**-like, **enzyme**-derived glycan-targeting affinity reagents engineered by computationally-guided directed evolution. The reagents are highly purified recombinant proteins, each designed to bind a specific glycan structure. They have advantages over naturally occurring lectins in rapid detection and enrichment of glycoconjugates, making glycoscience simple.

The Pan-Specific Lectenz® is a sialic acid affinity reagent for the detection, separation and enrichment of sialoglycans terminating in Siaα2,3Gal, Siaα2,6Gal, and Siaα2,8Sia commonly found in glycoconjugates (glycoproteins, glycolipids, and oligo or polysaccharides). This reagent can be employed as a capture reagent in a variety of applications.

The **SiaRich Pan-Specific Lectenz® Affinity Columns** (Cat # SC0005) are pre-packed ligand-coupled columns for rapid enrichment and purification of all sialoglycoconjugates in a linkage independent manner (pan-specific) in a process called Lectenz® Affinity Chromatography (LAC). Specifically bound sialylated glycoproteins or other biomolecules may be eluted non-competitively from the column using a simple high-salt buffer.

Form and Storage

The **SiaRich** affinity columns are prepacked and FPLC-ready. They are supplied in Sia Lectenz® Storage Buffer (SLSB; 50 mM EPPS, 100 mM NaCl, pH 7.5). They are stable at 4°C. Binding capacity is >300 µg fetuin from the first two months of production date. Never freeze the columns.

Affinity Chromatography Guide

LAC can be performed using the **SiaRich** Affinity Columns manually by syringe injection or automatically on an FPLC system. Either way, a luer connector is required.

1. Equilibrate column with 5 mL Sia Lectenz Binding Buffer (SLBB; 10 mM EPPS and 10 mM NaCl, pH 7.5) at 1 ml/min.
2. Inject an analyte (for the first LAC run, we recommend 400 µg fetuin in 1 ml SLBB) at 0.5 ml/min
3. Wash column with 10 mL SLBB at 1 ml/min.
4. Elute bound glycoprotein(s) non-competitively with 5 mL of Sia Lectenz® Elution Buffer (SLEB; 10 mM EPPS and 0.5 M NaCl, pH 7.5), or competitively with 5 ml of 50 mM sialyllactose sodium salt dissolved in SLBB.
5. Regenerate column with 5 mL of Sia Lectenz Regeneration Buffer (SLRB; 10 mM EPPS, 1.0 M NaCl, pH 7.5).
6. Ready column for next LAC separation of sialoglycoconjugates by repeating step 1.
7. Fill column with 5 mL SLSB for storage less than one month. For longer storage, a preservative such as 0.05% sodium azide may be added to the buffer.
8. The column may be re-used until the elution peak contains less than 300 µg of 400 µg fetuin injected as the sole analyte.

Special Notes:

1. Complex mixtures, e.g. cellular extracts, may be injected at a slow flow rate, e.g. 0.1 ml/min. Alternatively, the column can be incubated at 4°C for up to 16 hours with injected sample to maximize binding.
2. Binding to **SiaRich** Affinity Columns is sensitive to salt. Titration of NaCl concentration in the binding buffer may be performed. Increasing salt concentration may reduce non-specific binding, but may also impact the column's binding capacity.

Corporate Headquarters: Innovation Gateway, 111 Riverbend Rd, Athens, GA 30602

Satellite Operations: San Diego Science Center, 3030 Bunker Hill St., San Diego, CA 92109

Phone: (706) 549-4484 Fax: (706) 353-8485 E-mail: sales@lectenz.com Web: <https://www.lectenz.com>