

**NEW**

# Glycobiology

## reagents

### Glycoprotein Eluting Solutions

Glycoproteins are frequently isolated and purified from protein mixtures using columns of agarose-bound lectins. After applying a protein mixture, the agarose-lectin column is washed free of unwanted proteins and the glycoprotein bound to the lectin is eluted with a sugar that inhibits binding. Unfortunately, achieving complete elution with a simple sugar solution can be difficult. Vector Laboratories has developed five Glycoprotein Elution Solutions in the neutral pH range that maximize the yield of eluted glycoproteins and preserve the activity of the agarose-bound lectins for repeated use. All components of these ready-to-use Glycoprotein Eluting Solutions can subsequently be removed by dialysis.

Vector Laboratories is introducing a series of neoglycoproteins for use in Glycobiology Research applications. Neoglycoproteins generally describe proteins that, in their native form, do not contain carbohydrate groups but have been chemically derivatized with sugars.

Nine neoglycoproteins are available, each with a unique sugar attached to the protein. They are produced by coupling simple sugars to highly purified Bovine Serum Albumin (BSA). These glycoconjugates retain free amino groups, allowing them to be subsequently labeled with fluorochromes, biotin, or other tags. Each is supplied as a 10 mg/ml solution.

Glycoprotein Eluting Solution for:	Cat. No.	Size	Neoglycoprotein	Cat. No.	Size
Mannose- or Glucose-binding Lectins	ES-1100	100 ml	BSA-Mannose	G-1000	10 mg
Galactose- or GalNAc-binding Lectins	ES-2100	100 ml	BSA-Galactose	G-2000	10 mg
Fucose- or Arabinose-binding Lectins	ES-3100	100 ml	BSA-Fucose	G-3000	10 mg
GlcNAc- or Chitin-binding Lectins	ES-5100	100 ml	BSA-GalNAc	G-4000	10 mg
Sialic Acid-binding Lectins	ES-7100	100 ml	BSA-Chitin	G-5000	10 mg
			BSA-GlcNAc	G-6000	10 mg
			BSA-Sialic Acid	G-7000	10 mg
			BSA-Arabinose	G-8000	10 mg
			BSA-Glucose	G-9000	10 mg

### Applications:

#### Glycoprotein Eluting Solutions

- Eluting Glycoproteins from Agarose Lectin Columns

#### Neoglycoproteins

- **Binding Activity of Agarose Lectin Columns**  
These neoglycoproteins have been tested for their ability to bind to lectin-agarose beads. They can be used as a quick check to determine whether a lectin-agarose column has retained its ability to bind glycoproteins.
- **Positive Controls for Glycoprotein Blots**  
Labeled lectins are frequently used to detect, identify, or characterize glycoproteins on a western blot or a dot blot. A sample of a specific neoglycoprotein can be dotted on a corner of the blot just prior to detection and used as a positive control.
- **Localize Endogenous Lectins in Tissues and Cells**  
Since these neoglycoproteins have free amino groups, they can be easily labeled with fluorochromes, biotin, or other tags. These labeled neoglycoproteins might be used to identify or localize endogenous sugar-binding proteins in biological tissues or cells.

# Neoglycoprotein Binding and Eluting Solutions Chart

Agarose-Bound Lectins	Sugars Conjugated to Bovine Serum Albumin							Glycoprotein Eluting Solutions						
	Mannose (G-1000)	Galactose (G-2000)	Fucose (G-3000)	GalNAc (G-4000)	[GlcNAc] <sub>1-3</sub> (G-5000)*	GlcNAc (G-6000)	Sialic Acid (G-7000)	Arabinose (G-8000)	Glucose (G-9000)	(ES-1100)	(ES-2100)	(ES-3100)	(ES-5100)	(ES-7100)
AAL (AL-1393)			+					+						
Banlec (AL-1413)	+								+					
Con A (AL-1003)	+								+					
sCon A (AL-1003S)	+								+					
DSL (AL-1183)					+								+	
DBA (AL-1033)				+										
ECA (AL-1143)				+										
GNA (AL-1243)	+													
GSL I (AL-1103)		+												
GSL II (AL-1213)						+							+	
Jacalin (AL-1153)			+											
LCA (AL-1043)	+								+					
LTL (AL-1323)			+										+	
LEL (AL-1173)					+									+
PNA (AL-1073)		+												
PHA-E (AL-1123)		+												
PHA-L (AL-1113)		+												
PSA (AL-1053)	+													
RCA <sub>120</sub> (AL-1083)		+												
RCA <sub>60</sub> (AL-1093)		+												
SNA (AL-1303)							+							+
SBA (AL-1013)				+										
UEA I (AL-1063)			+										+	
VVA (AL-1233)				+										
WGA (AL-1023)									+					+
SWG A (AL-1023S)									+					+
WFL (AL-1353)													+	

+ Indicates binding to lectin.

\* [GlcNAc]<sub>1-3</sub> is predominant sugar mixture in chitin hydrolysate.

+ Indicates recommendation for eluting glycoproteins from agarose-bound lectins.

### Glycoprotein Eluting Solutions (Cat. No.)

### For Agarose Bound:

- ES-1100 Mannose- and Glucose-Binding Lectins
- ES-2100 Galactose- or GalNAc-Binding Lectins
- ES-3100 Fucose- and Arabinose-Binding Lectins
- ES-5100 GlcNAc- or Chitin-Binding Lectins
- ES-7100 Sialic Acid-Binding Lectins



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