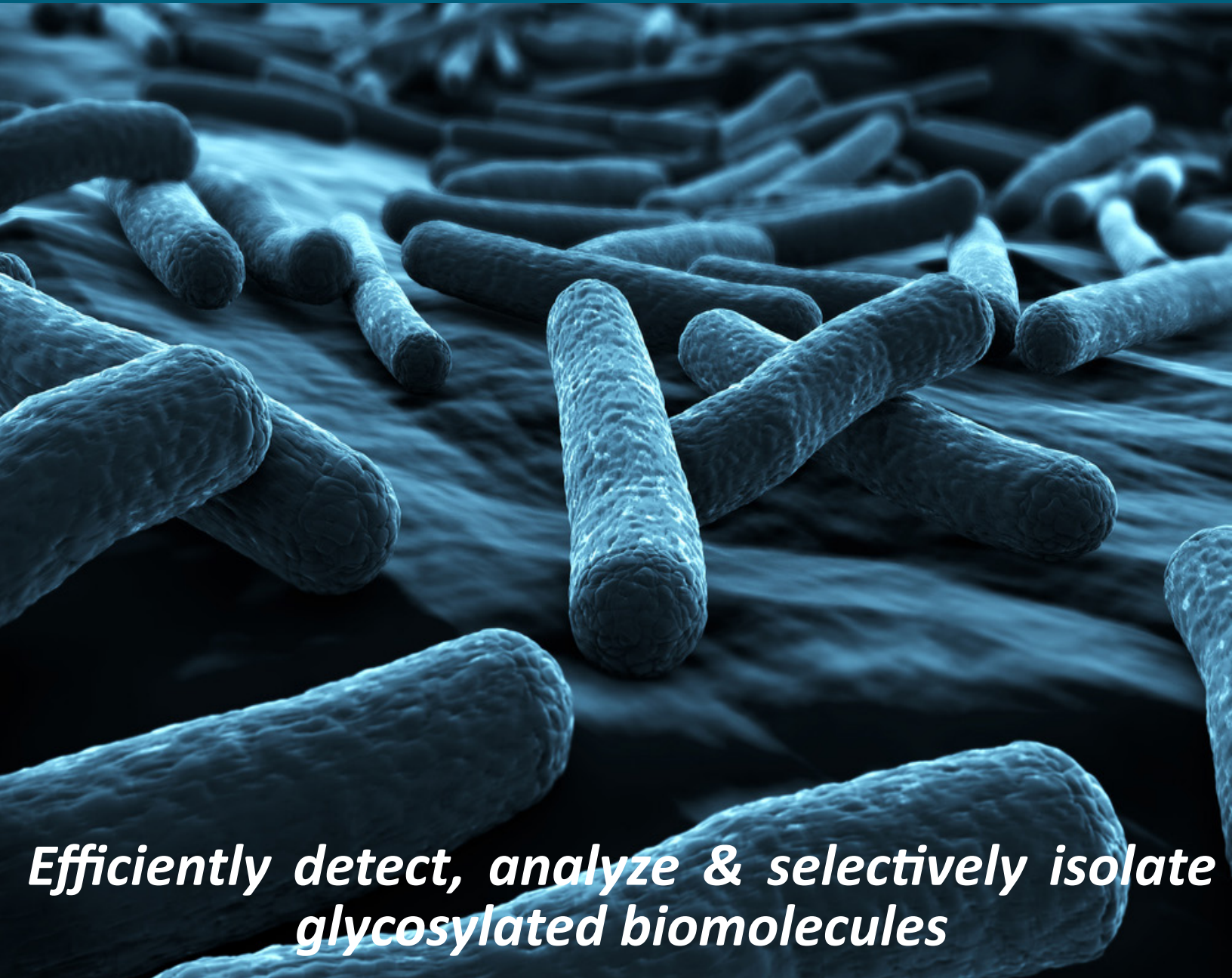


**amsbio**

# Recombinant Prokaryotic Lectins

**Specific - Consistent - Scalable**



*Efficiently detect, analyze & selectively isolate  
glycosylated biomolecules*

# Recombinant Prokaryotic Lectins - Enhanced Glycoselective Tools for Life Science Research

We provide high quality recombinant prokaryotic lectins (RPLs) for use as glycoselective tools. RPLs enable simple, rapid and sensitive analysis of intact glycosylated biomolecules. Recombinant production methods overcome many of the problems traditionally associated with plant derived lectin products. In addition, mutagenesis strategies have been employed to extend the product range creating novel RPLs with modified and enhanced carbohydrate binding properties.

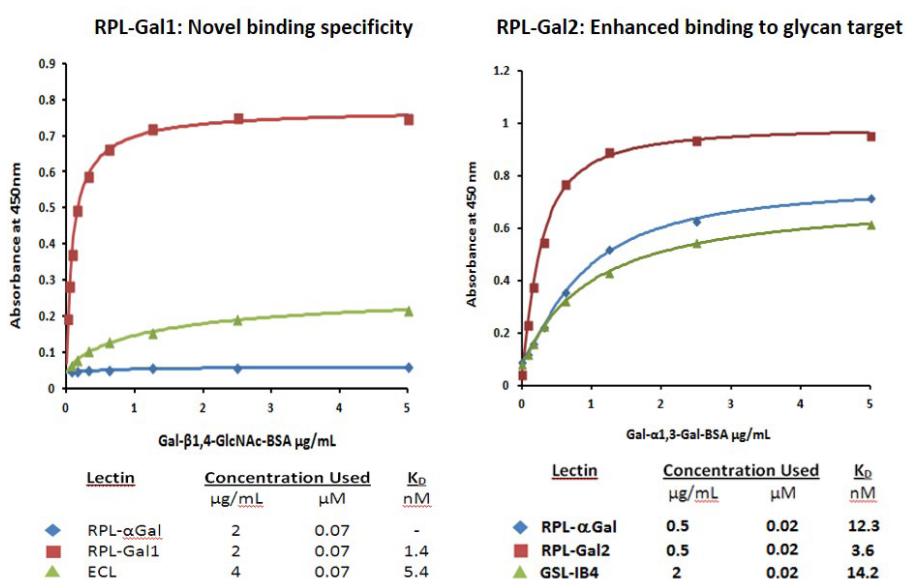
## Advantages

- ✓ High specificity and affinity for glycan targets
- ✓ High quality & consistent performance
- ✓ Readily scalable production
- ✓ High sensitivity detection
- ✓ Compatible with the use of reducing agents
- ✓ Genetically incorporated affinity purification tags for easy detection

RPLs have been developed with specificity for key glycan structures commonly displayed on glycosylated biomolecules and biotherapeutic products.

Lectin	Specificity
RPL- $\alpha$ Gal	$\alpha$ -Gal, GalNAc
RPL-Gal1	$\beta$ 1,4-gal, LAcNAc
RPL-Gal2	$\alpha$ -Gal, GalNAc
RPL-Gal3	$\alpha$ -Gal
RPL-Gal4	$\beta$ 1,4-gal, LAcNAc, Lewis <sup>x</sup>
RPL- $\alpha$ Man	Fuc > Man
RPL-Man2	Terminal Man

**Figure 1:** Generation of novel RPL's through site directed mutagenesis of RPL- $\alpha$ Gal and comparison to commercial equivalent, ECL and GSL-IB4. Kinetic constants were calculated from the data generated by enzyme-linked lectin assays, whereby RPLs binding to glycoprotein targets are detected using standard commercially available conjugated/labelled antibodies.



## High Performance Glycoselective Bioaffinity Matrices

RPLs can be readily immobilized at high densities onto a wide range of solid support media to create high capacity and highly efficient lectin affinity chromatography (LAC) tools for all application scales enabling:

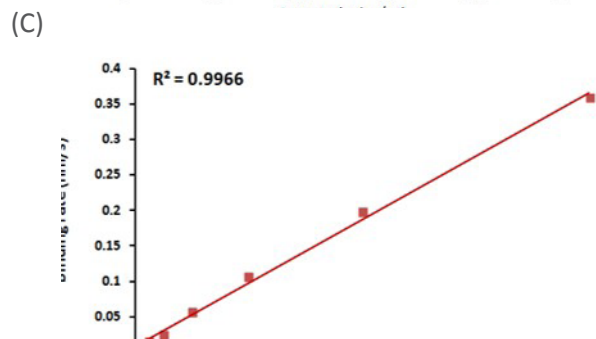
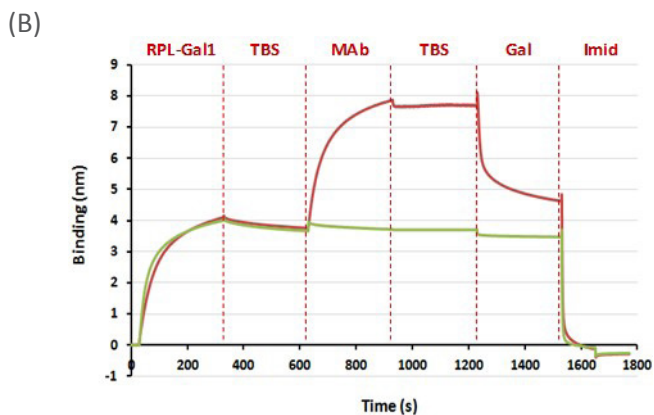
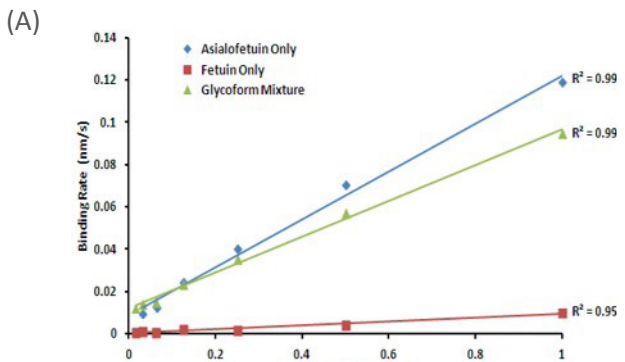
- Simple glycoselective separation, isolation and concentration of intact glycosylated biomolecules and their glycoforms.
- Isolation of biomolecules under gentle conditions samples can be applied to LAC columns in physiological buffers. Bound species can be efficiently recovered by incorporation of appropriate sugars into mobile phases.
- Samples are not exposed to any extreme conditions (pH, salt or solvents).
- Capture of target glycoproteins directly from complex media.
- Readily scalable production of RPLs enables their use for bioprocess scale applications.

## High throughput Glycoform analysis- use Biosensor tips

Small scale purification- Magnetic beads.  
Lab Scale purification- sepharose support.

ForteBio's BLI technology was used to assess the ability of RPL's to detect and quantify glycoprotein glycoforms.

(A) Asialofetuin was diluted in a fetuin solution such that the protein content remained constant at 1mg/mL. Immobilised RPL-Gal1 showed a linear response between 50 µg/mL and 1 mg/mL. (B) BLI sensorgram showing the response of RPL-Gal1 to a monoclonal antibody (-) and inhibition of the interaction in the presence of galactose (-). (C) Detection of Fc galactose using an RPL-Gal1 immobilised sensor.



## Applications

- ✓ High throughput Glycoform analysis
- ✓ Biochemical Assays
- ✓ Small scale purification - Magnetic beads
- ✓ Enzyme Linked Lectin Assays (ELLAs)


- ✓ Lab Scale purification - Sepharose support
- ✓ Lectin (Western) Blotting
- ✓ Lectin Arrays & Biochips
- ✓ Histochemical Staining

## Ordering Information

Catalog Number	Description	Pack Size
L-007-2MG	Recombinant Prokaryotic Lectin RPL <sup>®</sup> with specificity for Terminal Mannose: RPL <sup>®</sup> -Man2	2mg
L-006-2MG	Recombinant Prokaryotic Lectin RPL <sup>®</sup> with specificity for Fucose > Mannose: RPL <sup>®</sup> -aMan	2mg
L-005-2MG	Recombinant Prokaryotic Lectin RPL <sup>®</sup> with specificity for beta-1,4-Galactose, N-acetyllactosamine: RPL <sup>®</sup> -Gal4	2mg
L-004-2MG	Recombinant Prokaryotic Lectin RPL <sup>®</sup> with specificity for alpha-Galactose: RPL <sup>®</sup> -Gal3	2mg
L-003-2MG	Recombinant Prokaryotic Lectin RPL <sup>®</sup> with specificity for alpha-Galactose, N-acetylgalactosamine: RPL <sup>®</sup> -Gal2	2mg
L-002-4MG	Recombinant Prokaryotic Lectin RPL <sup>®</sup> with specificity for beta-1,4-Galactose, N-acetyllactosamine: RPL <sup>®</sup> -Gal1	4mg
L-002-2MG	Recombinant Prokaryotic Lectin RPL <sup>®</sup> with specificity for beta-1,4-Galactose, N-acetyllactosamine: RPL <sup>®</sup> -Gal1	2mg
L-002-1MG	Recombinant Prokaryotic Lectin RPL <sup>®</sup> with specificity for beta-1,4-Galactose, N-acetyllactosamine: RPL <sup>®</sup> -Gal1	2mg
L-001-2MG	Recombinant Prokaryotic Lectin RPL <sup>®</sup> with specificity for alpha-Galactose, N-acetylgalactosamine: RPL <sup>®</sup> -αGal	2mg

AMSBIO is the source for RPL technology in Europe, Middle East, Africa and North America. RPL technology is developed and manufactured by GlycoSelect Ltd

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