



Glycosciences Products 2024

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Description

Lectins are proteins or glycoproteins which possess the ability to bind specifically sugars. They have no enzyme activity and are not antibodies. Lectins are ubiquitous in nature, being found in all kinds of organisms (virus, microorganisms, plants, invertebrates and vertebrates). Lectins are usually oligomeric proteins and have many binding sites. The binding constant of the specific free sugar is generally many orders of magnitude lower than the binding constant of a glycoconjugate (glycolipid, glycoprotein...) containing this sugar. Lectins agglutinate cells, some lectins are even blood type specific, but they are also able to recognise cells surface glycans allowing to distinguish between different cells species and states. Furthermore some lectins stimulate lymphocyte and induce mitosis. The lectins have been used for :

- **Studies of glycobiological interactions with glycans or glycans mimics**
- **Detection, isolation, and structural studies of glycoproteins**
- **Study the dynamics of the cell surface glycoconjugates**
- **Cell identification and to separate subpopulation of cells and subcellular organelles**
- **Study endocytosis, neoplastic transformation**
- **Mitogenic stimulation of lymphocytes**
- **Glyco-biomarkers discovery and new diagnostics assays design**

List of Natural Lectins

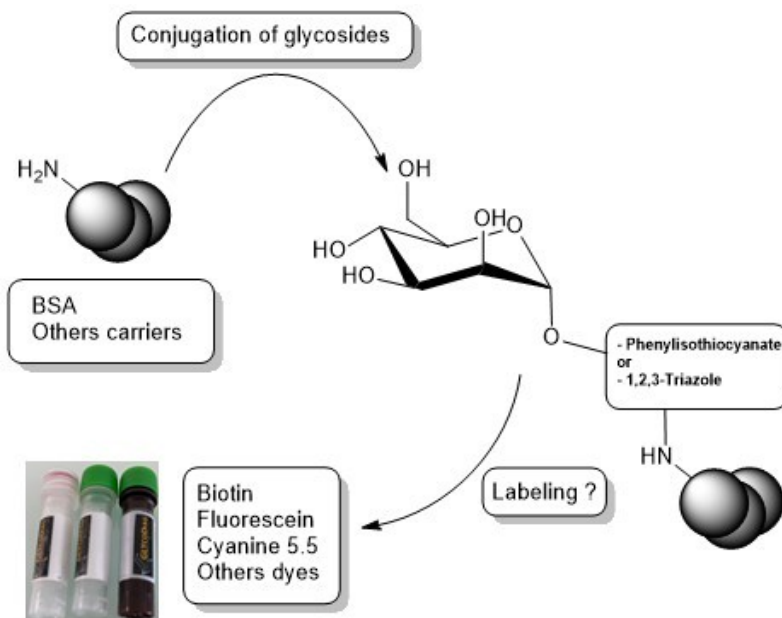
Reference	Short Name	Common name	Glycans structures specificity
L1222	ABA	<i>Agaricus Bisporus</i>	Gal(β-1,3) GalNAc
L1221	AIA / Jacalin	<i>Artocarpus intergrifolia</i>	Galα1-6 or Galβ1-3GalNAc (T-antigen)>> lactose, more specific for T-antigen than PNA
L1367	AML	<i>Astragalus membranaceus</i>	Galβ
L1205	ASA	<i>Allium sativum agglutinin</i>	α(1,3)-linked mannosyl units
L1889	BanLec	<i>Musa acuminata</i>	αMan
L1254	CJA	<i>Crotalaria juncea</i>	Gal (Lac>GalNAc)
L1366	cMOL	<i>Moringa oleifera</i>	Complex glycans, inhibited by asialofetuin
L1201	Con A	<i>Canavalia ensiformis</i>	Man > Glc ; branched mannoses α
L1249	CorM	<i>Coregonus lavaretus marenae</i>	Rhamnose
L1206	GNL / GNA	<i>Galanthus nivalis</i>	Terminal mannoses. Manα1-3Man ; α2-macroglobulin ; bind mannopentaose
L1202	LcH	<i>Lens culinaris</i>	Manα/Glcα > GlcNAcα, enhanced by Fuca1-6 on the core GlcNAc-Asn N-glycopeptides
L1252	NPA	<i>Narcissus pseudonarcissus Daffodil</i>	External or internal α or β mannose
L1240	PHA E	<i>Phaseolus vulgaris</i>	Galβ1-4GlcNAcβ1-2Man, the bisecting GlcNAcβ1-4Man is essential.
L1239	PHA L	<i>Phaseolus vulgaris</i>	Galβ1-4GlcNAcβ1-6Man of branched structures of N-glycans, Galβ1-4GlcNAcβ1-2Man.
L1223	PNA	<i>Arachis hypogaea</i>	Lactose, T- antigen
L1203	PSA, PEA	<i>Pisum sativum</i>	Man > Glc ; enhanced by Fuca1-6 on the core GlcNAc-Asn N-glycopeptides, IgM1A mouse
L1216	SBA	<i>Glycine max</i>	Preference for α over β-glycosidic linkage.
L1237	SNA	<i>Sambucus nigra</i>	Neu5Acα2-6Gal/GalNAc
L1476	TJA-II	<i>Trichosanthes japonica agglutinin II</i>	Fuca1-2Galβ-, GalNAcβ-, Galβ1-3/4-GlcNAc-, Galβ1-6Gal-
L1261	TXLC-I	<i>Tulipa gesneriana agglutinin</i>	GalNAc ; Gal
L1253	VEA	<i>Vicia ervilia</i>	Man>trehalose>Glc
L1204	VFA	<i>Vicia faba</i>	Man>Glc>GlcNAc
L1230	WGA	<i>Triticum vulgare</i>	GlcNAc; GlcNAcβ1-4 oligomers , core of Asn linked oligosacchide; Neu5Ac

List of recombinant Lectins

Reference	Short Name	Common name	Reference
L1255	BC2L-A	Burkholderia cenocepacia lectin A	Man α 1-2, Man α 1-3, Man α 1-6, dimanoside,
L1256	BC2L-C	Burkholderia cenocepacia lectin C (N terminal domain)	Fuc, oligo H type I, Lewis B, Lewis Y
L1688	FimH	Escherichia Coli Adhesin FimH	Mannosylated structure
L2094	HPyL	Human Polyomavirus 9 VP1	Neu5Gc
L1257	PA-IL	Pseudomonas aeruginosa lectin A	Gal α , Globoside
L1259	PAII-L	Pseudomonas aeruginosa lectin B (Lec B)	Fuc >> Man, Lewis A
L2099	RPL-Fuc1	Recombinant Prokaryotic Lectin Fuc1	Terminal α -linked Gal & GalNAc
L2095	RPL- α Gal	Recombinant Prokaryotic Lectin α Gal	Terminal β -linked Gal & LacNAc
L1579	RPL-Gal1	Recombinant Prokaryotic Lectin Gal1	Terminal α -linked Gal > GalNAc
L1580	RPL-Gal2	Recombinant Prokaryotic Lectin Gal2	Terminal α -linked Gal
L1581	RPL-Gal3	Recombinant Prokaryotic Lectin Gal3	Terminal β -linked Gal, LacNAc & Lewis x (Lex)
L1582	RPL-Gal4	Recombinant Prokaryotic Lectin Gal4	Fucose/Mannose: Lewis a (Lea), Lewis x (Lex) & terminal α -mannose
L1583	RPL- α Man	Recombinant Prokaryotic Lectin α Mannose	Terminal α -mannose
L1584	RPL-Man2	Recombinant Prokaryotic Lectin Man2	Terminal α 2-3-linked Sialic Acid (Neu5Ac) – on both N-linked and O-Linked
L2096	RPL-Sia1	Recombinant Prokaryotic Lectin Sia1	Terminal α 2-3-linked Sialic Acid (Neu5Ac) on O-Linked Glycans
L2097	RPL-Sia2	Recombinant Prokaryotic Lectin Sia2	Terminal α -linked Neu5Ac
L2098	RPL-Sia3	Recombinant Prokaryotic Lectin Sia3	α -linked Fucose
L1258	RSL	Ralstonia solanacearum	Fucose

Description

Neoglycoproteins are **glycosylated bovine serum albumin (BSA)** molecules obtained either after the conjugation of a phenylisothiocyanate glycosides with the ϵ -amino groups of lysine residues of BSA or by Click Chemistry between an alkyne (or azoture) glycoside with a BSA-azoture (or BSA-alkyne). The synthesis of each neoglycoprotein is conducted under a standardized procedure allowing excellent batch to batch reliability. Each neoglycoprotein is submitted to a complete quality control ensuring a total conformity with the specifications : purity, carbohydrates/protein ratio, labeling and **functionality assessed by interactions with lectins through GLYcoPROFILE**.



Mono, di-saccharide and complex neoglycoproteins are produced routinely and always available (from 1 mg to 50 mg) in unlabeled or labeled forms (Biotin, Fluorescein, Cyanine 5.5).

See the list of neoglycoproteins available in our lab on next page

Customized neoglycoproteins with others glycoconjugates as well as others carriers are available upon request.

Intended use & Benefits

Neoglycoproteins are known as “amplifiers” of carbohydrates-proteins interactions. The use of neoglycoproteins as tools to decipher glycoconjugates, carbohydrates binding proteins and more generally proteins-carbohydrates interactions were described in many studies. Indeed, neoglycoproteins are used in : histochemistry, ELISA assays, blotting assays, affinity chromatography, ITC, SPR, flow cytometry, confocal or electron microscopy.

Neoglycoproteins can be used for research purposes to:

- Identify lectins or lectin-like proteins.
- Purify lectins or other carbohydrate-binding proteins.
- Design new diagnostic tools.
- Discover biomarkers.
- Target drugs.
- Trigger immune response against carbohydrates moieties.

The **avidity** of the neoglycoproteins is 10^2 - 10^4 higher than corresponding free sugars.

The neoglycoproteins are very reliable and **stable products** that can be labeled with great flexibility.

The **high solubility** in aqueous solutions makes neoglycoproteins very powerful reagents for glycosciences studies.

Bibliography

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3. Cerdan *et al.* Biol. Cell, **1991**, 73, 35-42.
4. Duverger *et al.* Glycoconjugate J., **1999**, 16, 793-800.
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6. Monsigny *et al.* Amsterdam, Elsevier. **2007**, 3, 477-521.



List of Neoglycoproteins

Mono and Di-saccharides Neoglycoproteins			
Reference	Description	Glycan structure	Coupling ratio (glycans per BSA)
NeoCT	β Chitobiose-BSA	β Chitobiose	Between 10 to 20
NeoF	α LFuc-BSA	α LFucose	Between 10 to 20
NeoGa	α DGal-BSA	α DGalactose	Between 10 to 20
NeoGaP	β DGal6P-BSA	β DGalactose-6-phosphate	Between 10 to 20
NeoGaN	α DGalNAc-BSA	α D-N-acetylgalactosamine	Between 10 to 20
NeoGaf	α Galactofuranose-BSA	α Galactofuranose	Between 10 to 20
NeoaG	α DGlc-BSA	α DGlucose	Between 10 to 20
NeobG	β Glc-BSA	β Glucose	Between 10 to 20
NeoGN	β DGlcNAc-BSA	β D-N-acetylglucosamine	Between 10 to 20
NeoGU	β DGlucuronic acid-BSA	β DGlucuronic acid	Between 10 to 20
NeoGol	Glucitol-BSA-F	Glucitol	Between 10 to 20
NeoL	β DLac-BSA	β DLactose	Between 10 to 20
NeoM	α DMan-BSA	α DManose	Between 10 to 20
NeoMP	α DMan6P-BSA	α DManose-6-phosphate	Between 10 to 20
NeoR	α LRhamnose-BSA	α LRhamnose	Between 10 to 20
NeoX	β DXylose-BSA	β DXylose	Between 10 to 20

Complex Neoglycoproteins			
Reference	Description	Glycan structure	Coupling ratio (glycans per BSA)
NeoGalIII	Gal α 1,3Gal-BSA	GalIII : Gal α 1,3Gal	Between 5 to 10
NeoNeuAcL	α NeuAc-BSA	N-acetylneuraminic acid (Neu5Ac)	Between 5 to 10
NeoNeuGcL	α NeuGc-BSA	N-glycolylneuraminic acid (Neu5Gc)	Between 5 to 10
NeoLex	Gal β 1-4(Fuca1-3)GlcNAc β 1-3GalNAc-BSA	Lewis X antigen : Gal β 1-4(Fuca1-3)GlcNAc β 1-3GalNAc	Between 5 to 10
NeoSlex	Neu5Aca2-3-Gal β 1-4(Fuca1-3)GlcNAc β 1-3GalNAc-BSA	Sialyl Lewis X antigen : Neu5Aca2-3-Gal β 1-4(Fuca1-3)GlcNAc β 1-3GalNAc	Between 5 to 10
NeoSTn	Neu5Aca6GalNAc-BSA	STn-antigen : Neu5Aca6GalNAc	Between 5 to 10
NeoT	Gal β 3GalNAc-BSA	T-antigen : Gal β 3GalNAc	Between 10 to 15
NeoTn (=NeoGaN)	α DGalNAc-BSA	Tn-antigen : α D-N-acetylgalactosamine	Between 10 to 20
Neo3'SL	3'Sialylactose-BSA	3'Sialylactose	Between 3 to 5
Neo6'SL	6'Sialylactose-BSA	6'Sialylactose	Between 3 to 5

Description

The **LEctPROFILE plate** is a lectin array (1,2) proposed by GLYcoDiag to highlight specific types of structures and/or to indicate the potential modifications of glycans with respect to reference structures. The relevant choice of a range of lectins (naturals (Table 1) or recombinants (Table 2)) makes it possible to validate the structure of glycans in a short time and with very simple basic equipment.

Each lectin are immobilized on the bottom of microtiter plates (96-well format), intended for absorbance or fluorescence interaction measurements. Up to 28 different lectins (see the list below) are proposed in a minimum format of 2 strips of 8 wells, in order to compose one or more microplates adapted to the desired analysis.



List of LEctPROFILE plates (natural lectins)

Reference	Short Name	Common Name
LP1222	ABA	<i>Agaricus Bisporus</i>
LP1221	AIA/Jacalin	<i>Artocarpus intergrifolia</i>
LP1367	AML	<i>Astragalus membranaceus</i>
LP1205	ASA	<i>Allium sativum agglutinin</i>
LP1889	BanLec	<i>Musa acuminata</i>
LP1209	BPA	<i>Bauhinia purpurea</i>
LP1254	CJA	<i>Crotalaria juncea</i>
LP1366	cMOL	<i>Moringa oleifera</i>
LP1201	ConA	<i>Canavalia ensiformis</i>
LP1249	CorM	<i>Coregonus lavaretus marenae</i>
LP1211	DBA	<i>Dolichos biflorus</i>
LP1206	GNL, GNA	<i>Galanthus nivalis</i>
LP1202	LcH	<i>Lens culinaris</i>
LP1252	NPA	<i>Narcissus pseudonarcissus Daffodil</i>
LP1236	MAA	<i>Maackia amurensis</i>
LP1242	MOA	<i>Marasmius oreades agglutinin</i>
LP1240	PHA-E	<i>Phaseolus vulgaris</i>
LP1239	PHA-L	<i>Phaseolus vulgaris</i>
LP1223	PNA	<i>Arachis hypogaea</i>
LP1203	PSA	<i>Pisum sativum</i>
LP1216	SBA	<i>Glycine max</i>
LP1237	SNA	<i>Sambucus nigra</i>
LP1261	TXLC-I	<i>Tulipa gesneriana agglutinin</i>
LP1234	UEA-I	<i>Ulex Europaeus</i>
LP1229	UEA-II	<i>Ulex Europaeus</i>
LP1253	VEA	<i>Vicia ervilia</i>
LP1204	VFA	<i>Vicia faba</i>
LP1230	WGA	<i>Triticum vulgare</i>

Table 1. Lists of naturals lectins available for the LEctPROFILE plate.

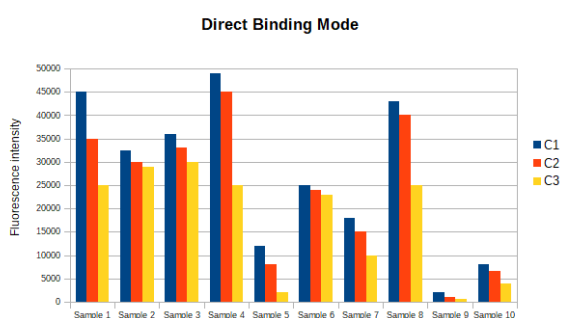
List of LEctPROFILE plates (recombinant lectins)

Reference	Short Name	Common name
LP1255	BC2L-A	<i>Burkholderia cenocepacia lectin A</i>
LP1256	BC2L-C	<i>Burkholderia cenocepacia lectin C (N terminal domain)</i>
LP1688	FimH	<i>Escherichia Coli Adhesin FimH</i>
LP2094	HPyL	<i>Human Polyomavirus 9 VP1</i>
LP1257	PA-IL	<i>Pseudomonas aeruginosa lectin A</i>
LP1259	PAII-L	<i>Pseudomonas aeruginosa lectin B (Lec B)</i>
LP2099	RPL-Fuc1	<i>Recombinant Prokaryotic Lectin Fuc1</i>
LP2095	RPL-αGal	<i>Recombinant Prokaryotic Lectin αGal</i>
LP1579	RPL-Gal1	<i>Recombinant Prokaryotic Lectin Gal1</i>
LP1580	RPL-Gal2	<i>Recombinant Prokaryotic Lectin Gal2</i>
LP1581	RPL-Gal3	<i>Recombinant Prokaryotic Lectin Gal3</i>
LP1582	RPL-Gal4	<i>Recombinant Prokaryotic Lectin Gal4</i>
LP1583	RPL-αMan	<i>Recombinant Prokaryotic Lectin αMannose</i>
LP1584	RPL-Man2	<i>Recombinant Prokaryotic Lectin Man2</i>
LP2096	RPL-Sia1	<i>Recombinant Prokaryotic Lectin Sia1</i>
LP2097	RPL-Sia2	<i>Recombinant Prokaryotic Lectin Sia2</i>
LP2098	RPL-Sia3	<i>Recombinant Prokaryotic Lectin Sia3</i>
LP1258	RSL	<i>Ralstonia solanacearum</i>

Table 2. Lists of recombinants lectins available for the LEctPROFILE plate.

Applications

The evaluation of compounds interactions with lectins is achieved by the **direct binding mode** that evaluate potential interaction of compounds ranging from pure molecule to complex mixtures (glycocojugate(s), complex carbohydrates or glycomimetics). Previous labeling of target molecule(s) by biotinylation or by fluoresceinylation is required for readout.



Name	Content	Analysis mode	Stability
LEctPROFILE plate	2 x 8 well strip per lectin used for fluorescence or absorbance detection	<i>Direct Binding Mode. The number of products analysed on 96-well plates is dependent on the number of 2x8 well strip by lectin.</i>	Each LEctPROFILE plate are stable for minimum 6 months at -20 °C

Table 3. Specifications of LEctPROFILE plates.

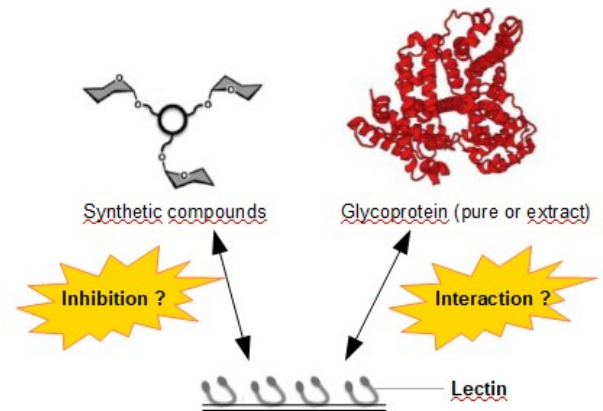
References

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Description

The **LEctPROFILE® kits** allow **efficient** evaluation of crude or purified glycoconjugate interactions (*i.e.* synthetic molecules or glycoconjugates) with lectins by a simple measurement of absorbance or fluorescence. The LEctPROFILE® kits enable a **fast measurement** (below 3 h) and are **easily accessible to all**.

Each kit is composed of a 96-well plate containing immobilised target lectin, and supplemented with the corresponding tracer and the revealing solution. All our lectins are control quality proofed by a standardized procedure assessed by interactions with specific neoglycoproteins or glycoproteins through GLYcoPROFILE® method.



LEctPROFILE® kits are designed for relevant applications such as:

- 1) **Detection of desirable or undesirable glycans during the early stage of quality control of biotherapeutics;**
- 2) **Identification of glyco-biomarkers related to cells behaviour and/or pathology;**
- 3) **Analysis and characterisation of the glycosylation level of glycoproteins contained in biological fluids or to target the sialylation status of relevant serum biomarkers;**
- 4) **Research of antagonist for lectins of interest that are well-known to be involved in particular disorder or in biological mechanism.**

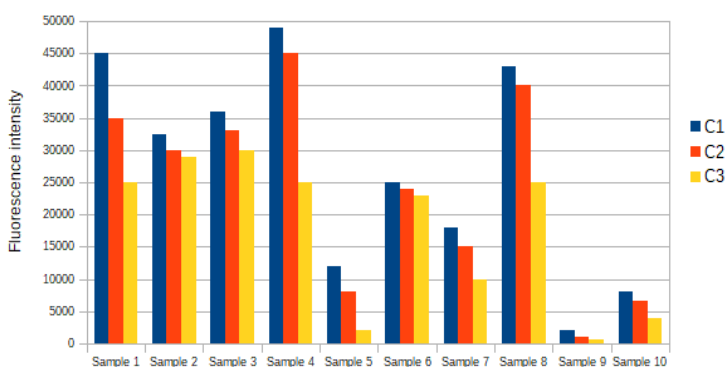
How to use LEctPROFILE kits ?

The evaluation of compound interactions with lectins on LEctPROFILE® kits are possible by two different modes:

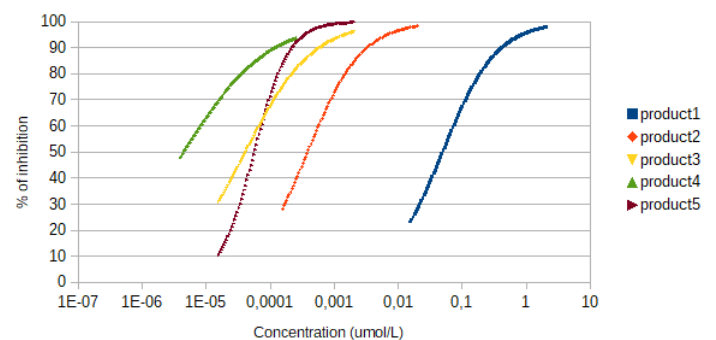
- **Direct Binding** is used to evaluate the potential interaction of compounds ranging from pure molecule to complex mixtures (glycoconjugate(s), complex carbohydrates or glycomimetics). Previous labeling of target molecule(s) by biotinylation or by fluoresceinylation is required for readout.

- **Competition Mode** : Competitive interaction between a sample and a specific labelled tracer known to have a good affinity for the lectin without preliminary labeling of sample. This mode is typically used for the evaluation of the IC₅₀-value (*i.e.* concentration corresponding to 50% of lectin inhibition), for the screening of potential candidate, for avidity comparison or for batch to batch monitoring.

Direct Binding Mode



Competition Mode



List of LEctPROFILE® kits

Reference	Name	Specificity	Kit Content	Analysis mode
LK01	FimH LEctPROFILE® kit	Mannosylated glycans structures	- 1 x 96 microplate well for fluorescence detection - FimH tracer solution - Streptavidine-DTAF solution	<i>Direct Binding:</i> Up to 10 samples analysed in triplicate at 3 concentrations <i>Competition Mode:</i> Up to 6 to 8 samples analysed in duplicate
LK02	DC-SIGN & Langerin LEctPROFILE® kit	Mannosylated glycans structures	- 1 x 96 microplate well for fluorescence detection - DC-SIGN&Langerin tracer solution - Streptavidine-DTAF solution	<i>Direct Binding:</i> Up to 7 samples analysed in triplicate at 2 concentrations <i>Competition Mode:</i> Up to 3 samples analysed in duplicate
LK03	Galectin 3 LEctPROFILE® kit	B-Galactoside glycans structures	- 1 x 96 microplate well for absorbance detection - Galectin-3 tracer solution - Streptavidine-Peroxydase solution - OPD Tablets	<i>Direct Binding:</i> Up to 10 samples analysed in triplicate at 3 concentrations <i>Competition Mode:</i> Up to 6 to 8 samples analysed in duplicate
LK04E LK04G LK04M	Cells LEctPROFILE® kit (E : eucaryotic cells, G : germinal cells and M : Microbial cells)	Man, GalNAc, Galβ/α, GlcNAc, Fuc, Sialic acid, Rha	- 3 x 96 microplate well for fluorescence detection - CFSE Labelling solution	3 differents cells types analysed in triplicate on 22 lectins
LK05	α2,3_α2,6 LEctPROFILE® kit	Sialic acid (α2,3/α2,6) glycans structures	- 1 x 96 microplate well for fluorescence detection - α2,3 tracer solution - α2,6 tracer solution - Streptavidine-DTAF solution	<i>Direct Binding:</i> Up to 7 samples analysed in triplicate at 2 concentrations <i>Competition Mode:</i> Up to 3 samples analysed in duplicate
LK06	Galili LEctPROFILE® kit	Galα1,3Gal glycans structures	- 1 x 96 microplate well for absorbance detection - Galili tracer solution - Streptavidine-Peroxydase solution - OPD Tablets	<i>Direct Binding:</i> Up to 10 samples analysed in triplicate at 3 concentrations <i>Competition Mode:</i> Up to 6 to 8 samples analysed in duplicate
LK07	ASGPR LEctPROFILE® kit	GalNAc glycans structures	- 1 x 96 microplate well for fluorescence detection - ASGPR tracer solution - Streptavidine-DTAF solution	<i>Direct Binding:</i> Up to 10 samples analysed in triplicate at 3 concentrations <i>Competition Mode:</i> Up to 6 to 8 samples analysed in duplicate
LK08	Glycoprotein LEctPROFILE® kit	Man, GalNAc, Galβ/α, GlcNAc, Fuc, Sialic acid, Rha, Xyl	- 3 x 96 microplate well for fluorescence detection - Biotin Labelling solution - Streptavidine-Peroxydase solution - Dialysis units	3 glycoproteins at 1 concentration or 1 glycoprotein at 3 concentrations in triplicate on 24 lectins

Table 1. Description of LEctPROFILE® kits.

Additionally, and under request, the customization and development of a LEctPROFILE® kit according to your needs is possible. Indeed, we have access to a large choice of lectin from natural or recombinant sources (bacterial and human) that have been already validated in our GLYcoPROFILE® platform.

Stability

Reagents included in the kit are stable for 6 months at +4°C. LEctPROFILE plate is stable for 6 months at -20°C.

Intended use: The LEctPROFILE kits are for research use only

Description

LEctPROFILE* gels are affinity gel chromatography where lectins are immobilized on a Sepharose 4B fast flow matrix. Glycoconjugates can be recovered by competition with the specific inhibitory monosaccharide of the lectin. LEctPROFILE gels are used for the purification of glycoconjugates^{1,2} with specific N-glycan residues. LEctPROFILE gel are personalized reagents produced on your request (see the list of available natural and recombinant lectins, Tables 1 and 2) in 1, 2 or 5 mL. The binding capacity on LEctPROFILE gel of glycoprotein is over 1 mg per mL of gel.



Scheme 1. LEctPROFILE gel matrix.

List of LEctPROFILE gels (natural lectins)

Reference	Lectin	Common Name
LG1222	ABA	<i>Agaricus Bisporus</i>
LG1221	AIA/Jacalin	<i>Artocarpus intergrifolia</i>
LG1367	AML	<i>Astragalus membranaceus</i>
LG1205	ASA	<i>Allium sativum agglutinin</i>
LG1889	BanLec	<i>Musa acuminata</i>
LG1209	BPA	<i>Bauhinia purpurea</i>
LG1254	CJA	<i>Crotalaria juncea</i>
LG1366	cMOL	<i>Moringa oleifera</i>
LG1201	ConA	<i>Canavalia ensiformis</i>
LG1249	CorM	<i>Coregonus lavaretus marenae</i>
LG1211	DBA	<i>Dolichos biflorus</i>
LG1206	GNA	<i>Galanthus nivalis</i>
LG1202	LcH	<i>Lens culinaris</i>
LG1252	NPA	<i>Narcissus pseudonarcissus Daffodil</i>
LG1236	MAA	<i>Maackia amurensis</i>
LG1242	MOA	<i>Marasmius oreades agglutinin</i>
LG1240	PHA-E	<i>Phaseolus vulgaris</i>
LG1239	PHA-L	<i>Phaseolus vulgaris</i>
LG1223	PNA	<i>Arachis hypogaea</i>
LG1203	PSA	<i>Pisum sativum</i>
LG1216	SBA	<i>Glycine max</i>
LG1237	SNA	<i>Sambucus nigra</i>
LG1261	TXLC-I	<i>Tulipa gesneriana agglutinin</i>
LG1234	UEA-I	<i>Ulex europaeus II</i>
LG1229	UEA-II	<i>Ulex europaeus II</i>
LG1253	VEA	<i>Vicia ervilia</i>
LG1204	VFA	<i>Vicia faba</i>
LG1230	WGA	<i>Triticum vulgare</i>

Table 1. Lists of natural lectins available for the LEctPROFILE gel.

List of LEctPROFILE gels (recombinant lectins)

Reference	Lectin	Common Name
LG1255	BC2L-A	<i>Burkholderia cenocepacia lectin A</i>
LG1256	BC2L-C	<i>Burkholderia cenocepacia lectin C (N terminal domain)</i>
LG1688	FimH	<i>Escherichia Coli Adhesin FimH</i>
LG2094	HPyL	<i>Human Polyomavirus 9 VP1</i>
LG1257	PA-IL	<i>Pseudomonas aeruginosa lectin A</i>
LG1259	PA-IIL	<i>Pseudomonas aeruginosa lectin B (Lec B)</i>
LG2095	RPL- α Gal	<i>Recombinant Prokaryotic Lectin Fuc1</i>
LG1579	RPL-Gal1	<i>Recombinant Prokaryotic Lectin αGal</i>
LG1580	RPL-Gal2	<i>Recombinant Prokaryotic Lectin Gal1</i>
LG1581	RPL-Gal3	<i>Recombinant Prokaryotic Lectin Gal2</i>
LG1582	RPL-Gal4	<i>Recombinant Prokaryotic Lectin Gal3</i>
LG1583	RPL- α Man	<i>Recombinant Prokaryotic Lectin Gal4</i>
LG1584	RPL-Man2	<i>Recombinant Prokaryotic Lectin αMannose</i>
LG2096	RPL-Sia1	<i>Recombinant Prokaryotic Lectin Man2</i>
LG2097	RPL-Sia2	<i>Recombinant Prokaryotic Lectin Sia1</i>
LG2098	RPL-Sia3	<i>Recombinant Prokaryotic Lectin Sia2</i>
LG2099	RPL-Fuc1	<i>Recombinant Prokaryotic Lectin Sia3</i>
LG1258	RSL	<i>Ralstonia solanacearum</i>

Table 2. Lists of recombinants lectins available for the LEctPROFILE gel.

References

1. Misaki, A., Kakuta, M., Meah, Y., Goldstein, I. J. *J. Biol. Chem.* **1997**, 272, 25455-25461.
2. Sueyoshi, S., Tsuji, T., Osawa, T., *Biol. Chem. Hoppe-Seyler*, **1985**, 366, 213-221.

Description

CarbPROFILE gels are monosaccharides-Sepharose affinity matrices used for purification of specific carbohydrate-binding proteins¹. The carbohydrates are attached through their non reducing hydroxyl group after pre-activation of sepharose matrix by divinylsulfone (DVS) (see *scheme 1 below*). The binding of lectins and carbohydrates binding proteins to carbohydrate affinity gel is non-covalent and reversible with high capacity. Lectins and carbohydrates binding proteins are both usually stable compounds which can be recovered by competitive elution (*i.e.* 0.2 to 0.5 M of monosaccharide) or by modulations of pH and/or ionic strength in high yield and purity.



Scheme 1. CarbPROFILE gel matrix

Specifications of CarbPROFILE gel

See below (Table 1), the specification of CarbPROFILE gel matrix.

Reference	Name	Specificity	Capacity (mg of protein/mL of gel)	Unit size ^a (mL)
CGF	Fucose-CarbPROFILE gel	Fucose binding protein	> 15 (based on UEA-I lectin)	5, 10 or 25
CGGa	Galactose-CarbPROFILE gel	Galactose binding protein	> 15 (based on AIA lectin)	5, 10 or 25
CGGN	N-Acetylglucosamine-CarbPROFILE gel	N-Acetylglucosamine binding protein	> 15 (based on WGA lectin)	5, 10 or 25
CGM	Mannose-CarbPROFILE gel	Mannose binding protein	> 30 (based on ConA lectin)	5, 10 or 25
CGR	Rhamnose-CarbPROFILE gel	Rhamnose binding protein	> 15 (based on CorM lectin)	5, 10 or 25

Table 1. Specifications of CarbPROFILE gel. a. available in a pre-packed column or in suspension.

References

- Andon, N. L., Eckert, D., Yates III, J. R., Haynes, P. A. *Proteomics*, **2003**, 3, 1270-1278.