

GLYcoDiag is a French company specialized in **glycobiology and glycoanalysis services and products** for the biotech, pharma, veterinary, cosmetic and diagnostic industries. Our unique experience provides the services and products needed to speed up your projects. **Visit our website for more information [www.glycodiag.com](http://www.glycodiag.com)**

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## Focus on Moringa Oleifera lectin (cMol)

GLYcoDiag tries to develop and proposes continually several original lectins for your research and development projects in glycosciences. All our lectins are available labelled or not labelled with biotin or fluorescein.

**Moringa oleifera lectin (cMol)** is isolated from the seeds of plants after precipitation with ammonium sulphate. cMol lectin is an homodimeric lectin of 14 kDa, composed of two subunits of 7 kDa linked by disulfide bonds. cMol has a complex carbohydrate-binding specificity and recognizes mainly the following glycoproteins: fetuin and thyroglobulin. Moreover, as shown in our GLYcoPROFILE platform, cMol recognizes specifically the neoglycoprotein  $\alpha$ GlcNAc (i.e. BSA- $\alpha$ GlcNAc).



cMol lectin exhibits a large range of properties as mentioned below :

- cMol agglutinates human and rabbit erythrocytes but it is not blood group specific.
- cMol displays insecticidal activity.
- cMol has an anticoagulant activity.
- cMol has also a flocculent activity which confers to the tree *Moringa oleifera* the name of « tree of life » in relation with the traditional use of the leaves to purify water.

**Contact us for more information and quotation**

## Original natural lectins

**Musa acuminata lectin (BanLec)** is isolated from banana pulp and purified by affinity chromatography column on **CarbPROFILE Mannose**. In fact, the carbohydrate recognition domain of BanLec is mainly specific for mannose.

**Tulipa Gesnerania lectin (TxLC-I)** is isolated from tulip bulbs. TxLC-I shows the highest affinity for : (1) **triantennary N-glycans** with three Gal residues (especially, Gal with  $\beta$ (1-3) linkage at non-reducing termini) ; (2) **diantennary N-glycans** with a fucose residue linked through  $\alpha$ (1-6) linkage to the innermost GlcNAc. In this case, fucose residue increases considerably the lectin binding.

**Coregonus lavaretus marenae lectin (CorM)** is a lectin isolated from the eggs of the fish *Coregonus lavaretus marenae* (Salmonidae family). The most efficient carbohydrate inhibitors are methyl  $\alpha$ -L-rhamnoside,  **$\alpha$ -L- rhamnose**, and raffinose (I didn't understand this sentence).

## GLYcoDiag's last publications

### - GLYcoPROFILE® used for the development of emotional active ingredient

Queiroz, A., Landemarre, L., Vial, F., Aubert, A., *IFSCC Magazine 1 2020*

The GLYcoPROFILE® study was used recently in the development of a new cosmetic ingredient developed by Seqens. This study highlights the ability of a high molecular weight exopolysaccharide to provide a quantifiable benefit versus placebo by visibly enhancing not only the quality of the skin tissue but also **the consumer's emotional state**.

### - A review about Galactofuranose-related Enzymes

Senecar, M., Lafite, P., Eliseeva, S. V., Petoud, S., Landemarre, L., Daniellou, R., *Int. J. Mol. Sci. 2020, 21, 3465*.

Galactofuranose is a rare form of the well-known galactose sugar, and its occurrence in numerous pathogenic micro-organisms makes the enzymes responsible for its biosynthesis interesting targets. This review summarizes the role of these carbohydrate-related proteins with a special emphasis on the galactofuranosidases recently characterized as an efficient recombinant biocatalyst.