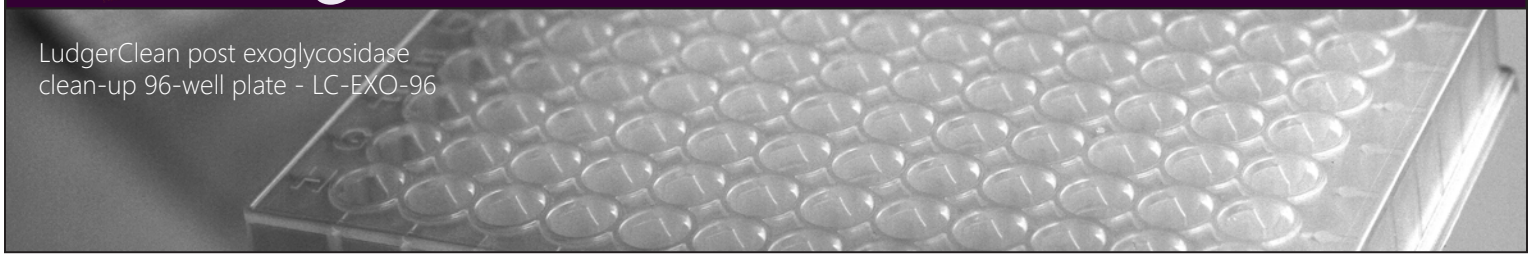
Ludger News

May/June 2020



Coronavirus disease 2019 (COVID-19)

The current global situation with COVID-19 has changed our daily lives and the way we interact. Ludger is driven by mutual objectives: staying safe and making critical updates to our laboratories, logistics, shipping, supply chain, purchasing and other processes to ensure you can purchase products for your glycoprofiling workflows or send Ludger samples for testing.

Some of our deliveries may take longer than usual and some of the products might not always be readily available. We hope you will bear with us as we do our best to continue to deliver to you during these challenging times.

As always, our Scientists are happy to help with technical support and can discuss suitable products for your needs as well as our custom Glycan Analysis Services.

We are here to support you.
Ludger

Coming Soon: Sialidase Testing Panel

A key component in a well-designed analytical strategy is the inclusion of standards and process controls. We are excited to announce the forthcoming launch of our Sialidase Testing Panel. This standard contains a mixture of α2-3, α2-6 and α2-8 sialylated oligosaccharides:

1. 3'-Sialyl Lewis X [**Neu5Ac-α2-3Gal-β1-4(Fuc-α1-3)GlcNAc**] – contains α2-3 linked sialic acid along with branched α1-3 fucose (introducing steric hindrance for some enzymatic reactions)
2. GD3 oligosaccharide – Disialyllactose [**Neu5Ac-α2-8NeuAc-α2-3Gal-β1-4Glc**] – linear oligosaccharide containing α2-8 linked sialic acid
3. LSTa; Sialyllacto-N-tetraose a [**Neu5Ac-α2-3Gal-β1-3GlcNAc-β1-3Gal-β1-4Glc**] – linear oligosaccharide containing α2-3 sialic acid attached to galactose
4. LSTc; Sialyllacto-N-tetraose c [**Neu5Ac-α2-6Gal-β1-4GlcNAc-β1-3Gal-β1-4Glc**] – linear oligosaccharide containing α2-6 sialic acid attached to galactose
5. DSLNT saccharide [**Neu5Ac-α2-3Gal-β1-3(Neu5Ac-α2-6) GlcNAc-β1-3Gal-β1-4Glc**] – branched sialic acid oligosaccharide

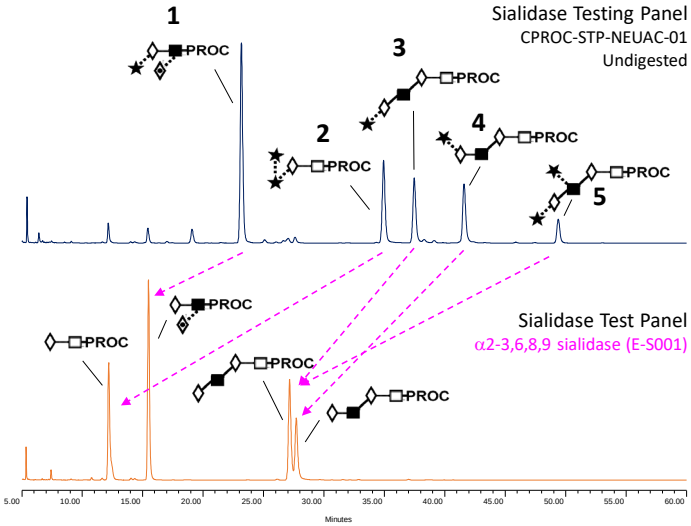


Figure: HILIC-UPLC profiles of procainamide labelled Sialidase Testing Panel (CPROC-STP-NEUAC-01). Top chromatogram shows undigested sample, bottom chromatogram shows sample treated with broad specificity sialidase (E-S001). Peaks were labelled with glycan structures. Arrows illustrate glycan digestion pathways.

Sialidase Testing Panel can be used as process positive control for sialidase digestions. This standard enables you to test if the sialidase has required specificity and that it had worked correctly. Sialidase Testing Panel will be available 2-AB and procainamide labelled. Cat# CAB-STP-NEUAC-01 and CPROC-STP-NEUAC-01

More information will be available soon on our website, www.ludger.com

To find out how to incorporate the Sialidase Testing Panel into exoglycosidase sequencing workflow and to view range of Ludger exoglycosidase enzymes available, visit our Exoglycosidase page.

For enquiries or more information, please contact: info@ludger.com

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New Product Launch:
Ludger post exoglycosidase clean-up spin columns (LC-EXO-A6) and 96-well plates (LC-EXO-96)

We are excited to announce the launch of Ludger's new post exoglycosidase clean-up spin columns (Cat # LC-EXO-A6) and 96-well plates (Cat # LC-EXO-96).

Exoglycosidases are used to support structural characterisation of glycans. Often, removal of enzymes from reaction mixture is needed before further processing and analysis of modified glycans.

At Ludger we offer a new product range that is designed for a rapid removal of enzymes and other protein material from glycan solution:

- Post exoglycosidase clean-up spin columns – convenient spin tube format that is compatible with traditional laboratory centrifuge. Available in pack of 6. Cat # LC-EXO-A6
- Post exoglycosidase clean-up 96-well plate – compatible with plate format centrifuge as well as vacuum manifold system (e.g. Ludger Cat # LC-VAC-MANIFOLD-KIT). Convenient if higher number of samples are required. Cat # LC-EXO-96

Both products: LC-EXO-A6 cartridges and LC-EXO-96 plates are suitable for unlabelled, 2-AB labelled, 2-AA labelled or procainamide labelled glycans.

To find out how to incorporate the clean-up consumables into exoglycosidase sequencing workflow and to view range of Ludger exoglycosidase enzymes available, visit our Exoglycosidase page.
For enquiries or more information, please contact: info@ludger.com

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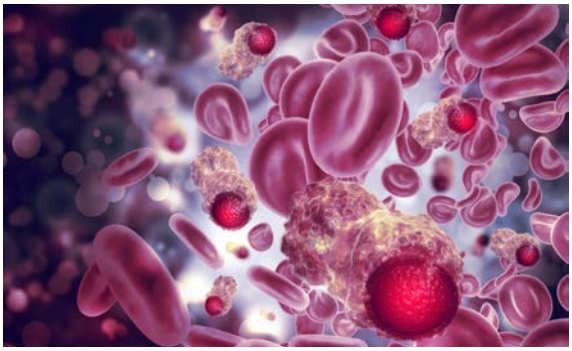
Publication in Frontiers in Chemistry:
A Matrix-Assisted Laser Desorption/Ionization-Mass Spectrometry Assay for the Relative Quantitation of Antennary Fucosylated N-Glycans in Human Plasma



Ludger is delighted to announce the publication of a robust technique for analysing glycan biomarkers in patient samples developed by our PhD researcher Osmond Rebello whilst on secondment at Leiden University Medical College.

With the increase in health-related discoveries using glycan based biomarkers has come the need to utilise such biomarkers with an increase in efficiency and robustness using instrumentation that is rapid enough to analyse patient samples in timeframes suitable for meaningful clinical outcomes.

This paper addresses this need by demonstrating and validating a MALDI mass spectrometry technique for patient plasma glycome analysis coupled with linkage stabilisation and characterisation of sialic acids and analysis of antenarry fucosylation, frequently implicated in the progression of cancers.

The MALDI-MS instrumentation used was both high end type such as seen in specialist analytical laboratories, but also an instrument of more modest capabilities regularly found in routine analytical labs.

The paper describes in detail how to implement the technique and demonstrates its effectiveness against some colorectal cancer patient samples where antennary fucosylation levels were found to reduce after surgery, indicating success in removing cancerous tissue.

Please visit our Enzyme webpage for more information on how to release glycans from plasma samples, and for more information about this article visit our Publications webpage.

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