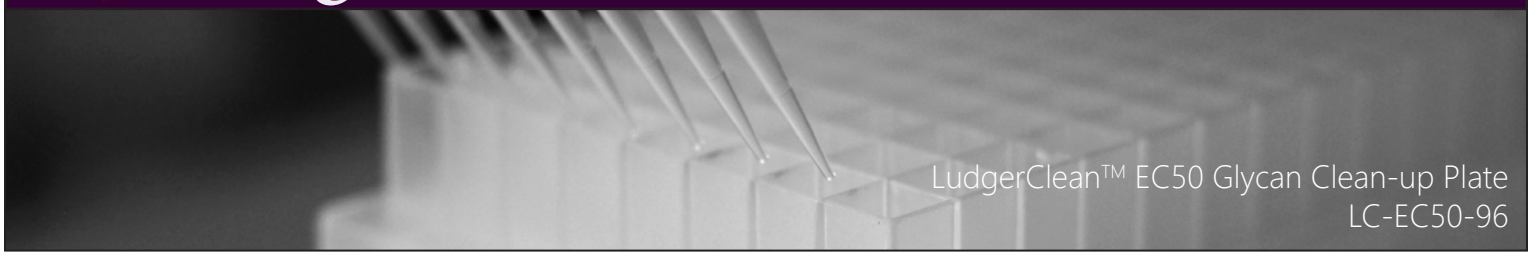
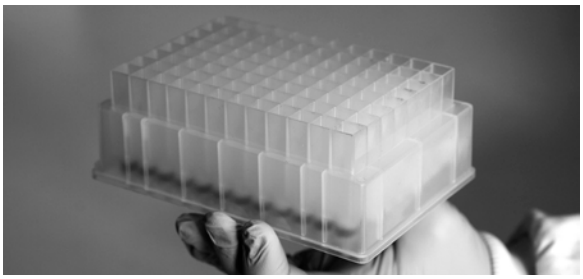
Ludger News

May/June 2021



New Product Coming Soon: Ludger's high throughput glycan purification plate



We are excited to announce the forthcoming launch of Ludger's new high throughput glycan purification plate (**catalogue no. LC-EC50-96**). This plate has been designed to purify glycans from non-carbohydrate material including salts, proteins and detergents by electronic interaction of the glycans with the surface of the plate.

Purification of glycans can be performed using LC-EC50-96 plate in your glycan analysis workflows as follows:

- After enzymatic or chemical release of glycans from glycoproteins
- After exoglycosidases (enzymatic) digestion of glycans to release individual monosaccharides to confirm glycan identity and structure
- Before and after glycan labelling using fluorescent tags such as 2-aminobenzamide acid (2-AB) and 2-aminobenzoic acid (2-AA) etc

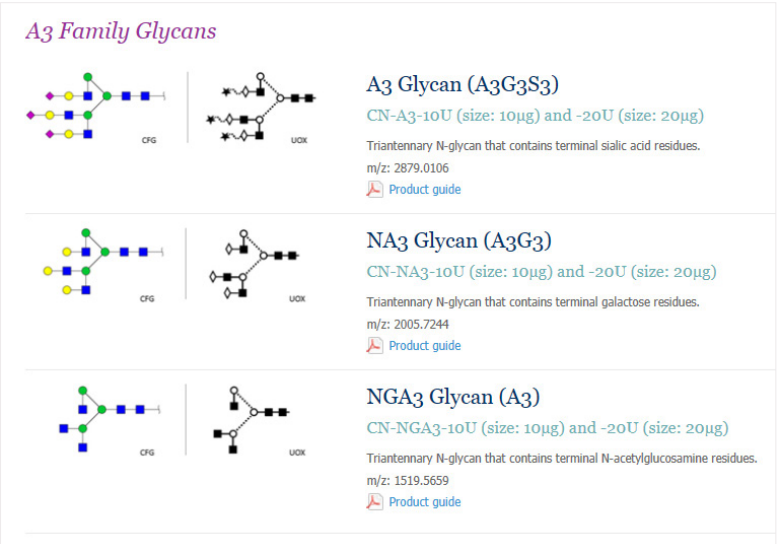
A wide range of glycans including N-linked and O-linked type oligosaccharides, tri-saccharides and larger structures can be purified using LC-EC50-96 plates as depicted in the workflow below and can be further analysed using orthogonal techniques.

Workflow:

More information will be available soon on our website. To find out how to incorporate the purification of glycans in your glycan analysis workflow please view our Glycan clean-up products page. For enquiries or more information, please contact: info@ludger.com

Announcing the launch of the new Ludger Glycan standards webpages

Ludger has a range of system suitability standards, process controls and reference standards for different applications including the analysis of sialic acids, monosaccharides, glycan profiling and characterisation. We provide a variety of unlabelled N-glycans (N), O-glycans (O), oligosaccharides, glycoproteins / glycopeptides and glycan library standards. Furthermore, our catalogue of standards also includes a large range of N- and O- glycan standards fluorescently labelled with 2-aminobenzamide (2-AB), 2-AA (2-aminobenzoic acid), procainamide, 8-aminopyrene-1,3,6-trisulfonic acid (APTS) and permethylated glycan standards. We also provide quantitative glycan and glycopeptide standards under the brand name Ludger BioQuant.



We have incorporated valuable information regarding each standard by including product specifications, glycan cartoon depicting the glycan structure, mass and links to their associated the generic product guides, specification sheets and safety data sheets to assist you with glycan profiling and characterisation.

For more information, please visit www.ludger.com/products/glycan-standards.
If you have any questions or to request a quotation, please contact us at info@ludger.com

Publication in Glycoconjugate Journal titled "Interlaboratory evaluation of plasma N-glycan antennary fucosylation as a clinical biomarker for HNF1A-MODY using liquid chromatography methods"

Ludger is pleased to announce that a successful collaboration with Quadram Institute Bioscience (QIB), Norwich, Oxford Centre for Diabetes, Endocrinology and Metabolism (OCDEM), University of Oxford, University of Zagreb and Genos Ltd, Croatia has resulted in publishing an article in the Glycoconjugate Journal. This article presents findings from an interlaboratory evaluation of a glycan biomarker for the most common monogenetic subtype of diabetes HNF1A-Maturity Onset Diabetes of the Young (MODY) by employing liquid chromatography (LC) methods which was funded by the EU Horizon 2020 project GlySign (www.glysign.eu)

The study used a novel α-1,3/4 linkage specific fucosidase enzyme (developed by QIB) to measure antennary fucosylation levels of N-glycans in blood plasma proteins of 320 clinical samples from UK and Croatia. See figure 1. The method was able to stratify patients by enabling discrimination of cases with pathogenic mutations in the HNF1A gene compared to those with benign or variants of unknown significance. The study provides new insights into translating this glycan biomarker to clinical practice and supports the development of a simpler, high-throughput assay for determining antennary fucosylation levels in MODY.

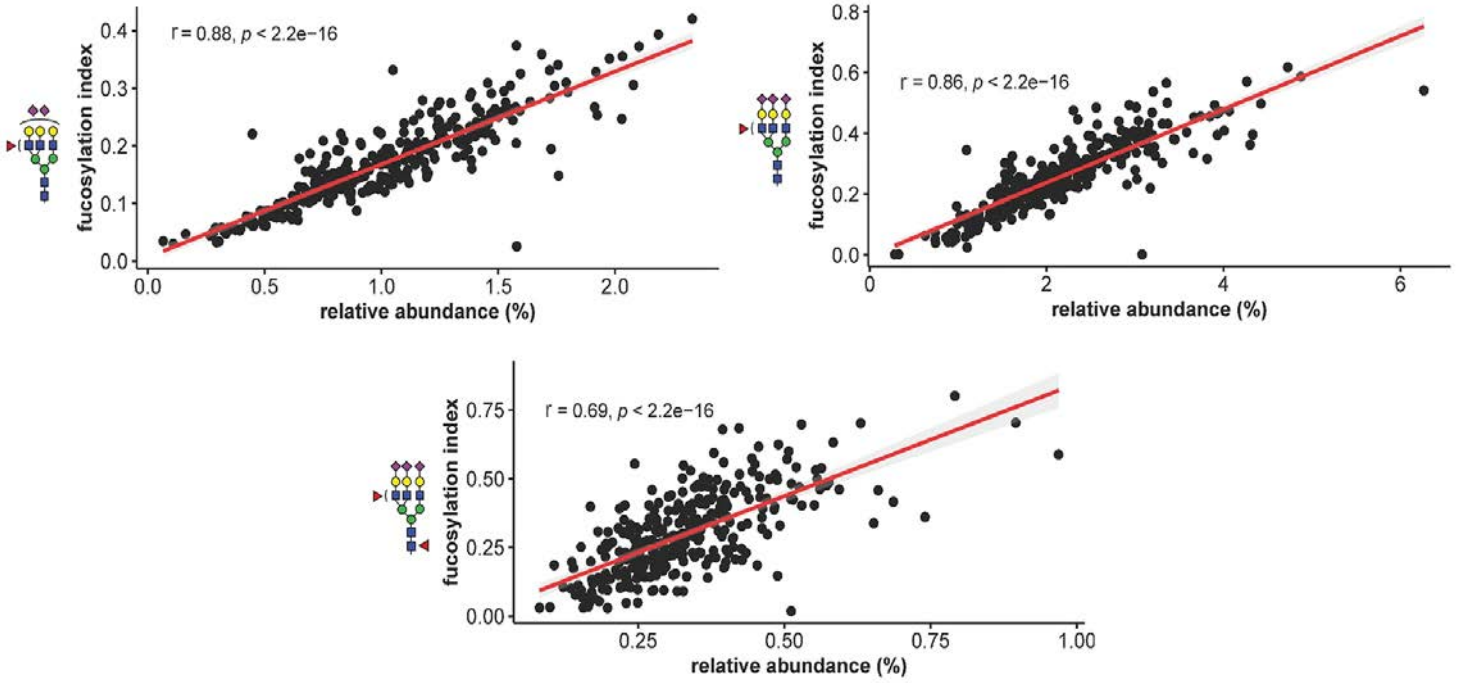


Figure 1: Correlation analysis illustrating the performance of three single glycan traits used as differentiating biomarkers for HNF1A-MODY in two independent laboratories. Antennary fucosylation levels measured as the relative abundance of antennary fucosylated glycans [18] or as fucosylation indexes (current study) were compared for 320 individuals with diabetes. The performance of each glycan trait is described by the Spearman's correlation coefficient (r)

To find out how to utilise enzymes in glycan characterisation visit our Endoglycosidase and Exoglycosidase enzyme pages. Visit our Procainamide webpage for more information on how to characterise glycans using LC-MS. For more information about this article visit our Publications webpage.