

Dear Collaborator,

Thank you for your being part of our community.

Ludger Team wishes you a Prosperous New Year 2024!



New N-Glycan Release & 2-AB Velocity Labelling Module now available!

We are excited to launch our **2-AB labelling bundle kit** which includes the complete set of reagents and glycan standards required for N-glycan analysis.

This bundle kit includes reagents sufficient for the analysis of **30 samples**:

It includes **PNGase F enzyme** for in-solution release of N-glycans, **2-AB labelling kit** and **clean-up cartridges** for post-labelling clean-up. The kit also includes an **IgG glycoprotein standard** to be used as a process control as well as a **glucose homopolymer** (system suitability standard). The protocol presented is the golden standard methodology for the analysis of N-linked glycans using **(U)HPLC**, **LC-MS** or **MALDI-MS** approaches.



This reliable, robust, and repeatable glycan release and labelling module/bundle kit can be used for the analysis of simple and complex **therapeutic samples**. They can also assist with **biological glycoprotein analysis** for cohort studies.

Release	Labelling	Clean Up	Analysis
PNGaseF release kit LZ-rPNGaseF-30	2-AB labelling kit with picoline borane LT-KAB-VP24	LudgerClean S cartridges LC-S-A6	(U)HPLC, LC-MS or MALDI-MS
Standards & Controls (run with your samples)			
Human IgG Glycoprotein Standard GCP-IGG-100U			2-AB labelled glucose homopolymer ladder CAB-GHP-30

All the components of this module (**LT-KAB-VP30-MOD**) can be found in our catalogue and all their corresponding technical information can be found on our website.

If you require any further information, please get in touch with us at info@ludger.com

LudgerZyme™ Sialate O-Acetylase Kit

For monitoring of diacetylation of sialic acids

Acetyl esterase (sialate-O-acetylase) is a recombinant protein from *Tannerella forsythia*, ATCC 43037 strain, expressed in *Escherichia coli*. The enzyme can be used to remove 9-, 8- and 7-O-acetyl groups from released sialic acids, released glycans or glycoproteins which can be **used to analyse sialic acid content** (glycosylation critical quality attribute). It can be used for **monitoring of diacetylation of sialic acids** on products such as erythropoietin (EPO) to assist with characterising glycoprotein therapeutics.

Application:

Sialate-O-acetylase is used to **remove 9-, 8- and 7-O-acetyl groups** from the EPO biopharmaceutical glycans as these sugars and their acetylation are believed to be essential factors for the function, efficacy, and half-life of the drug in patients. This enzyme can also be used for the characterisation of other highly sialylated biotherapeutics such as FSH and blood clotting factors.

Acetyl esterase (sialate-O-acetylase) is available to order from Ludger and assist you in characterising your biopharmaceuticals. For more information about this product please [contact us](#).

Product information:

LZ-ACASE-KIT Kit containing enzyme and buffer sufficient for 50 samples.

Article published on potential biomarkers for cardiovascular disease

Cardiovascular disease (CVD) is the most prominent non-communicable disease worldwide. Biomarkers for early detection and treatment to reduce disease burden are of great importance. **Sialic acids** have been identified as **potential biomarkers for CVD**, with two main derivatives of interest: **N-acetylneuraminic acid** and **9-O-acetyl-N-acetylneuraminic acid**. Plasma from CVD patients and healthy controls were analyzed to determine the absolute quantities of these two sialic acid derivatives. Analysis was performed by first labelling the samples with DMB using an **LT-KDMB-96** kit followed by analysis on a UHPLC system using a **Ludgersep UR2 UHPLC column**. The two sialic acid derivatives could be separated, identified and quantified using a standard curve (**CM-NEUAC-01** & **CM-NEU5,9AC2-01**). The concentrations of the sialic acids were compared between CVD patients and healthy controls to determine if sialic acids could perform as biomarkers for CVD with some promising results (Figure 1).

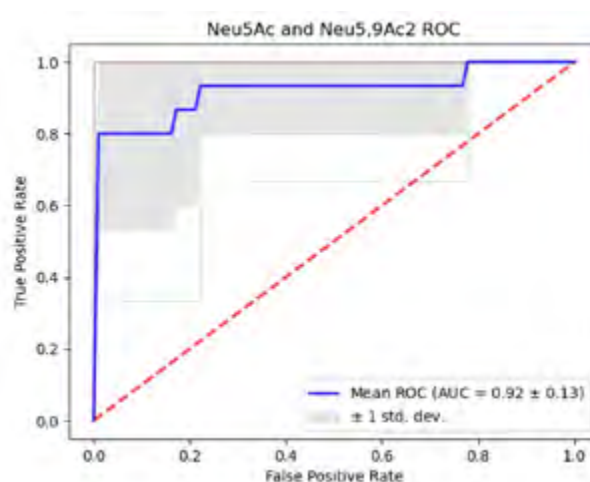


Figure 1. ROC curve for Neu5Ac + Neu5,9Ac2

Read the whole article [Elevated concentrations of Neu5Ac and Neu5,9Ac2 in human plasma: potential biomarkers of cardiovascular disease](#) published in the *Glycoconjugate Journal* by [Dr Cheeseman](#), et al., Scientist at Ludger.

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