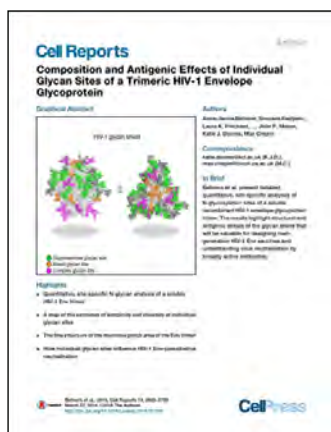


Glycoprofiling expertise with a commitment to: Quality. Consistency. Confidentiality.

Did you know that we work with over 50% of the world's top biopharma companies*? Whether we supply glycoanalytical technology or glycoprofiling services, we have something that is relevant to the industry. Please contact us if you wish to try out a new technology, or if you have a project for us to undertake.

*source: GlobalData, 2014

Collaboration with University of Oxford on HIV-1



The trimeric HIV type 1 (HIV-1) envelope glycoprotein (Env) is targeted by broadly neutralizing antibodies (bNAbs) produced by the immune system during infection. As part of our collaboration with Dr. Max Crispin and his group at the University of Oxford we performed site-specific N-glycosylation analysis of the gp120 and three gp41 subunits of Env.

Using MALDI-MS, LC-MS and HILIC-UPLC our results uncovered a dominance of oligomannose-type glycans and revealed a mosaic of glycan microclusters bearing under-processed glycans, especially in areas covering the gp120 outer domain and at the trimer interfaces. The information gained from this study will assist in the design of Env-based vaccine immunogens and the work has now been published in Cell Reports.

Title: Site-specific N-glycosylation analysis of HIV-1 Envelope Glycoprotein

[Full text version](#)

HPLC System Suitability Checks

It is important to perform regular system suitability checks when performing HPLC analysis to check that your column is fit for use. Ludger has a range of [system suitability standards](#) for different applications. See table below.

Here are the key points to remember:

1. Run a System Suitability Standard when you are setting up a new column, at the beginning of each subsequent run (after the column has been washed and conditioned) and also at the end of each run to demonstrate that your system is still optimal
2. Record the values for peak widths at half height (for reference)
3. If the peak width at half height increases or is no longer symmetrical it is time to change your column

Application	System Suitability Standard	Product Code
2AB labelled glycan analysis	2-AB labelled Glucose Homopolymer Ladder	CAB-GHP-30
Procainamide labelled glycan analysis	Procainamide labelled Glucose Homopolymer Ladder	CPROC-GHP-30
Sialic acids (DMB labelled)	DMB labelled Sialic Acid Reference Panel	CM-SRP-01
Monosaccharides (2AA labelled)	2AA labelled monomix	CM-MONOMIX-10

Ludger		IgG Glycan Names				
Ludger Product Name	Oxford Notation Name	Short name used with G1 glycan	Oxford Notation	CFG	Yeast	
M292	M21	M21	***	***		
M293	M25	M25	***	***		
M294	M26	M26	***	***		
M297	M27	M27	***	***		
M298	M28	M28	***	***		
M299	M29	M29	***	***		
NGA2	A2	G0	***	***		
A292	A292G1	G1	***	***		
A293	A292G1	G1	***	***		
M4E	A292	G0	***	***		
A2	A292G2	G2G1	***	***		

Making sense of glycan nomenclature

We know it can be confusing to understand the naming systems for different glycans so we have put together a table summarising the information for many of the main N-glycan structures found in human IgG. This includes the Oxford Notation naming system, Ludger product name, CFG nomenclature and structural images for the different glycans. So, if you are looking for a G0F glycan for example, we would refer to this as NGA2F glycan or FA2 glycan.

A full version of the table is available on our [main products webpage](#), within the System Suitability Standards and Controls section .

Using Ludger Products in a Workflow

The figure below shows how Ludger products can be used in succession to release, clean up and derivatize glycans (and glycopeptides) from your glycoprotein samples ready for analysis.

