

Certificate of Analysis

LudgerPure™ Procainamide Labelled IGG N-Glycan Library

Cat. #: CPROC-IGG-02
Size: approx. 50 pmol

Batch: B56U-02
Expiry: 21st May 2025

Amount: sample vial determined to contain **42.9 pmols** total glycan (quantitation performed using peaks 1-10 in figure 1) – Original test 17 Jul 2015, Re-test performed 21 May 2020.

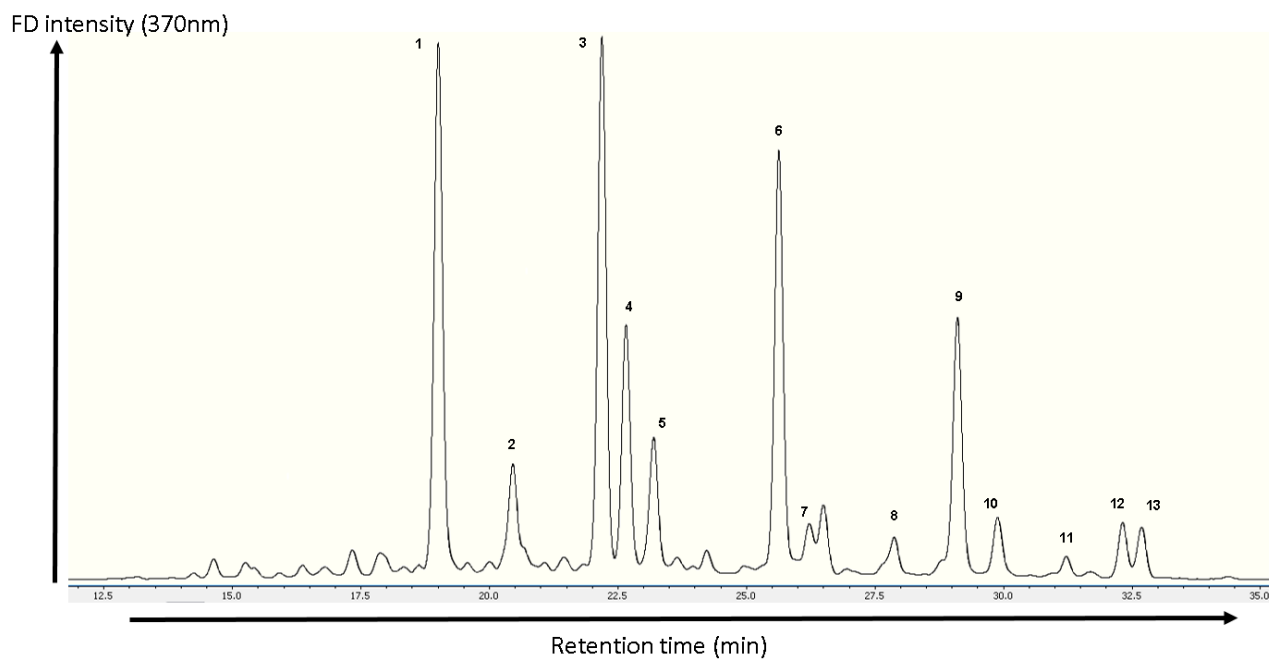


Figure 1: HILIC HPLC profile of Procainamide labelled IgG N-glycans released from source protein using hydrazine (see LC method conditions on page 3) (Cat. #: CPROC-IGG-02, Batch B56U-02).

Peak ID	Full name	Short name	Structure	GU value	% relative peak area
1	F(6)A2	FA2		5.74	18.0
2	F(6)A2B	FA2B		6.11	4.0
3	F(6)A2[6]G(4)1	FA2G1		6.56	18.2
4	F(6)A2[3]G(4)1	FA2G1		6.68	8.7
5	F(6)A2[6]BG(4)1	FA2BG1		6.81	4.9
	F(6)A2[3]BG(4)1	FA2BG1			
6	F(6)A2G(4)2	FA2G2		7.49	15.1
7	F(6)A2BG(4)2	FA2BG2		7.70	1.9
8	A2G(4)2S1	A2G2S1		8.11	1.4
9	F(6)A2G(4)2S1	FA2G2S1		8.49	9.3
10	F(6)A2BG(4)2S1	FA2BG2S1		8.72	2.2
11	A2G(4)2S2	A2G2S2		9.15	0.8
12	F(6)A2G(4)2S2	FA2G2S2		9.52	1.9
13	F(6)A2BG(4)2S2	FA2BG2S2		9.64	1.9

Table 1: Names, structures and GU values of each peak determined from the HILIC HPLC profile of Procainamide labelled IgG N-glycans (Cat. #: CPROC-IGG-02, Lot No. B56U-02).

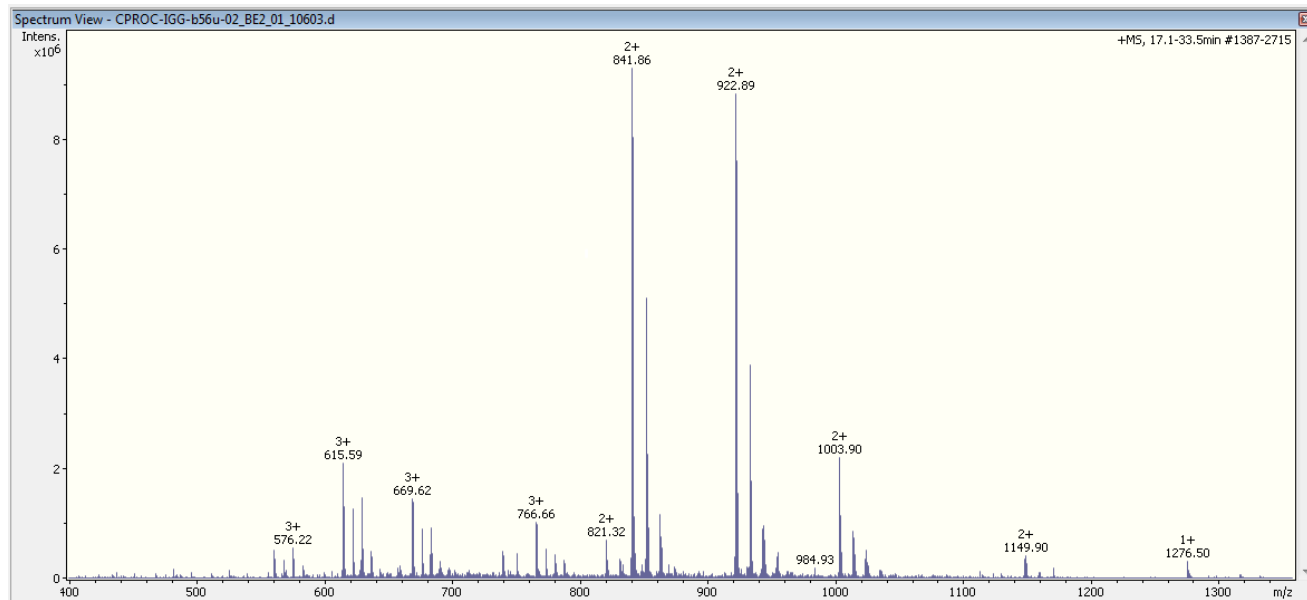


Figure 2: Summed positive ion mass spec analysis of procainamide labelled Glycan Sample. No significant unlabelled glycan peak present. (Cat. #: CPROC-IGG-02, Batch B56U-02). Unreduced glycans less than 5% of reduced peaks (4.0% unreduced FA2 and 4.6% unreduced FA2G1),

Procinamide glycans eluted under the following HPLC conditions:

Column: Waters BEH Glycan 1.7µm column (150mm)

Temperature: 40 °C

Solvent A: 50mM ammonium formate pH 4.4 **Solvent B:** 100 % acetonitrile

Gradient:

Time (min)	%B	Flow (ml/min)
0.0	72	0.4
40.50	57	0.4
43.50	0	0.2
45.50	0	0.2
46.50	72	0.2
48.50	72	0.4
75.00	72	0.4

Detector: Thermo U3000 FLR **Excitation wavelength:** 310 nm **Emission wavelength:** 370 nm

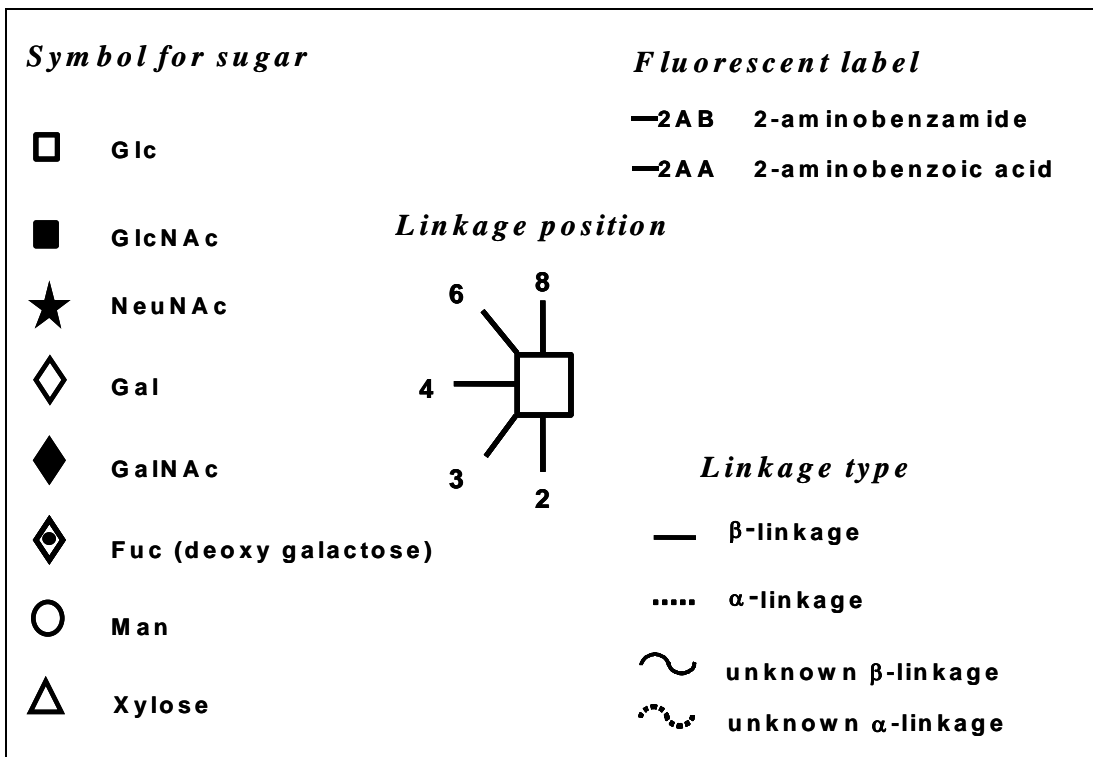


Figure 3: GlycoBase glycan structure key.