



Ludger

Certificate of Analysis

2AB Labelled IgG N-Glycan Library

Cat. #: CAB-IGG-01

Lot #: B54U-01

Size: ~200 pmol

Amount: Sample vial determined to contain 218.4 pmols total glycan (quantitation performed using glycan peaks 1-10 in figure 1) – Test performed 11 May 2015.

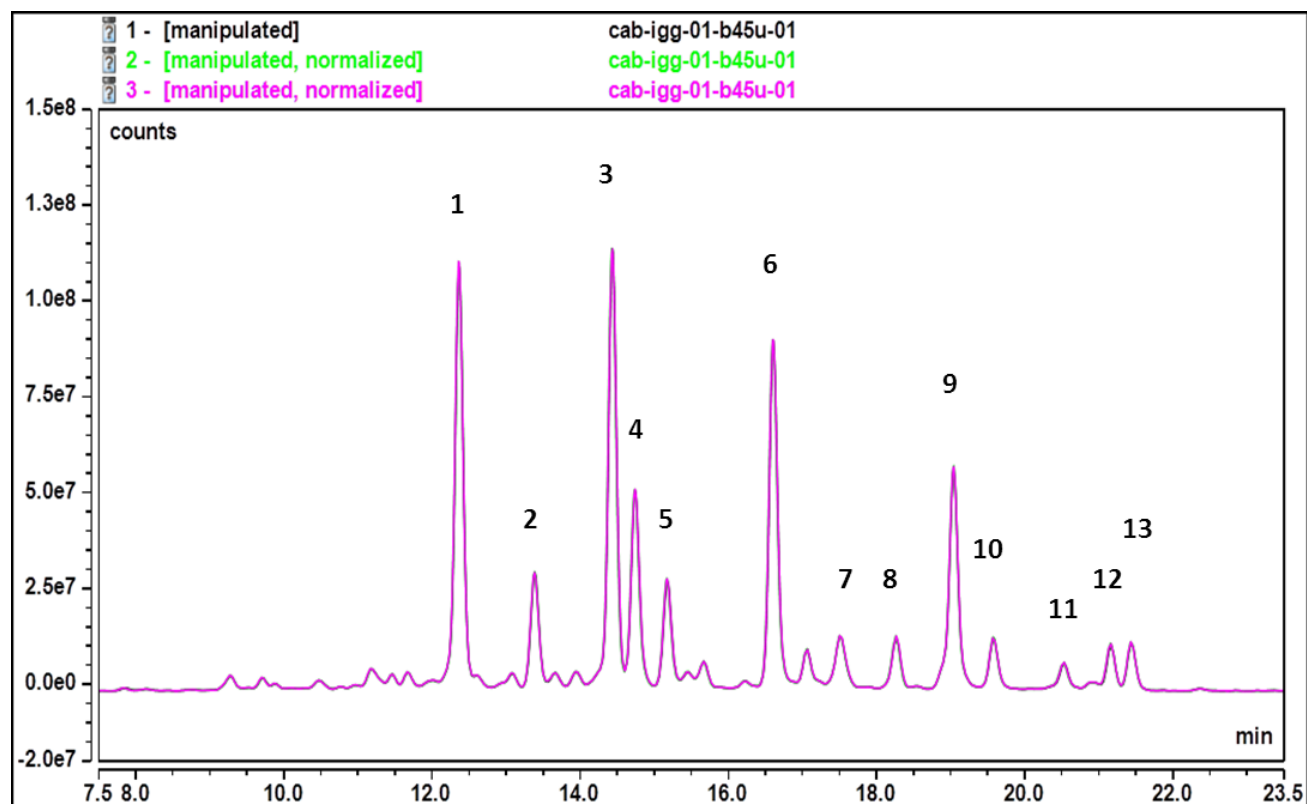
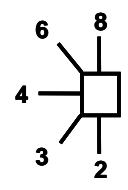


Figure 1: Waters BEH Glycan HPLC Profile of 2AB Labelled IgG N-Glycans, released by N-Mode hydrazinolysis (Cat. No. CAB-IGG-01, Lot No. B54U-01).

Peak ID	Full name	Short name	Structure	GU value	% relative peak area
1	F(6)A2	FA2		5.86	17.3
2	F(6)A2B	FA2B		6.21	4.6
3	F(6)A2[6]G(4)1	FA2G1		6.59	17.6
4	F(6)A2[3]G(4)1	FA2G1		6.7	8.1
5	F(6)A2[6]BG(4)1	FA2BG1		6.85	4.4
	F(6)A2[3]BG(4)1	FA2BG1			
6	F(6)A2G(4)2	FA2G2		7.42	13.7
7	F(6)A2BG(4)2	FA2BG2		7.78	2.4
8	A2G(4)2S1	A2G2S1		8.11	2.2
9	F(6)A2G(4)2S1	FA2G2S1		8.48	9.8
10	F(6)A2BG(4)2S1	FA2BG2S1		8.72	2.3
11	A2G(4)2S2	A2G2S2		9.18	1.4
12	F(6)A2G(4)2S2	FA2G2S2		9.52	1.9
13	F(6)A2BG(4)2S2	FA2BG2S2		9.66	2.0

Table 1: Names, structures and GU values of each peak determined using a Waters BEH Glycan column run on a Thermo U3000 UHPLC (Cat. No. CAB-IGG-01, Lot No. B54U-01).

Nomenclature

<i>Symbol for sugar</i>	<i>Linkage position</i>
□ Glc	
■ GlcNAc	
★ NeuNAc	
◇ Gal	
◆ GalNAc	
◊ Fuc (deoxy galactose)	
○ Man	
	<i>Linkage type</i>
	— β-linkage
 α-linkage

Structure Abbreviations

All N-glycans have two core GlcNAcs; F at the start of the abbreviation indicates a core fucose, (6) after the F indicates that the fucose is α 1-6 linked to the inner GlcNAc; M_x, number (x) of mannose on core GlcNAcs; A_x, number of antenna (GlcNAc) on trimannosyl core; A₂, biantennary with both GlcNAcs as β 1-2 linked; A₃, triantennary with a GlcNAc linked β 1-2 to both mannose and the third GlcNAc linked β 1-4 to the α 1-3 linked mannose; A₃', triantennary with a GlcNAc linked β 1-2 to both mannose and the third GlcNAc linked β 1-6 to the α 1-6 linked mannose; A₄, GlcNAcs linked as A₃ with additional GlcNAc β 1-6 linked to α 1-6 mannose; B, bisecting GlcNAc linked β 1-4 to β 1-3 mannose; G_x, number (x) of linked galactose on antenna, (4) or (3) after the G indicates that the Gal is β 1-4 or β 1-3 linked; [3]G1 and [6]G1 indicates that the galactose is on the antenna of the α 1-3 or α 1-6 mannose; S_x, number (x) of sialic acids linked to galactose; the numbers 3 or 6 in parentheses after S indicate whether the sialic acid is in an α 2-3 or α 2-6 linkage.