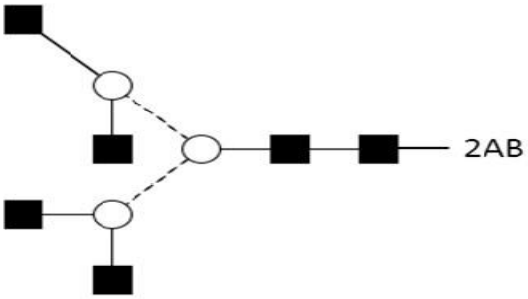
Certificate of Analysis

LudgerPure™ 2AB Labeled NGA4 Glycan

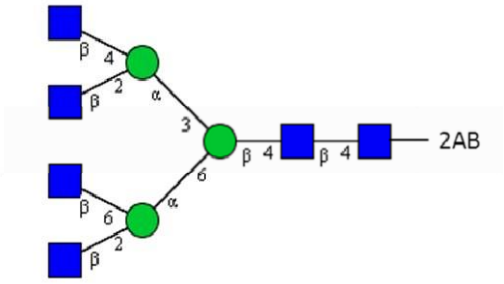
Cat. #: CAB-NGA4-01
Size: approx. 100 pmol

Batch: B37U-03
Expiry: 31st Jul 2018

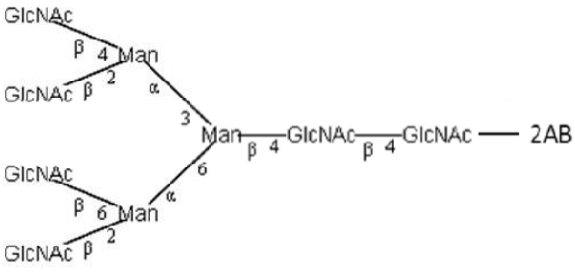
Structure



Oxford Notation



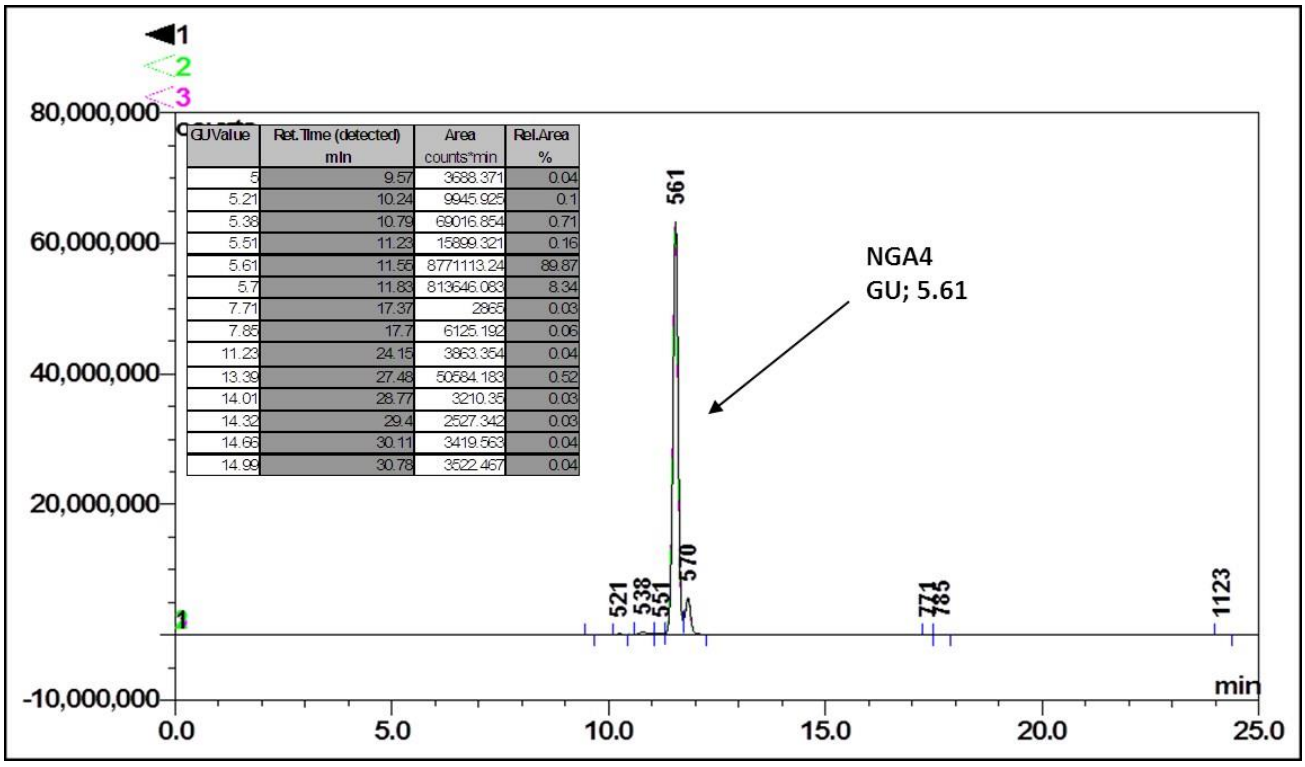
CFG Notation



Text Notation

Purity: 89.85% 2AB labeled NGA4 glycan, as assessed by HPLC - see Fig 1.

Amount: Sample vial determined to contain 115.9 pmols NGA4 glycan – Test performed 31 July 2013.



GU Value	Ret. Time (detected) min	Area counts*min	Rel. Area %
5	9.57	3688.371	0.04
5.21	10.24	9945.925	0.1
5.38	10.79	69016.854	0.71
5.51	11.23	15899.321	0.16
5.61	11.55	8771113.24	89.87
5.7	11.83	813646.083	8.34
7.71	17.37	2865	0.03
7.85	17.7	6125.192	0.06
11.23	24.15	3863.354	0.04
13.39	27.48	50584.183	0.52
14.01	28.77	3210.35	0.03
14.32	29.4	2527.342	0.03
14.66	30.11	3419.563	0.04
14.99	30.78	3522.467	0.04

Figure 1: HILIC HPLC profile of 2AB labelled NGA4 glycan (see method conditions below) (Cat. #: CAB-NGA4-01, Batch B37U-03).

*NGA4 *glycan structure identified by MALDI, MS & HPLC (GU value comparison to GlycoBase). This structure is drawn according to the scheme developed by Oxford-Dublin Glycobiology Laboratory* (see Fig 2).

Ludger

2-AB* NGA4 *peak seen above, eluted at* 11.55 *minutes, under the following conditions:

HPLC Running Conditions:

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

0.56mL/min.

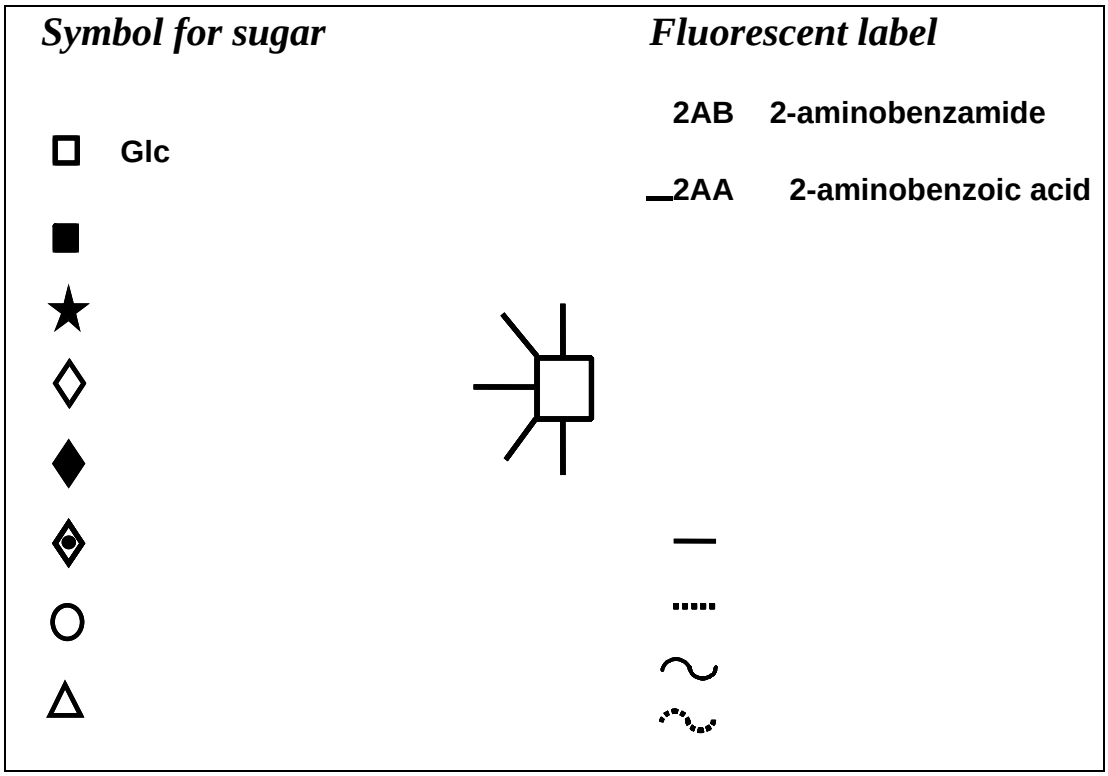
Temperature: 60 °C

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

Gradient:

Time (min)	%B
0.0	78.0
1.5	78.0
24.8	58.0
25.8	40.0
25.9	78.0
31.0	78.0

Detector: Dionex FLD-3000 Excitation wavelength: 250 nm Emission wavelength: 428 nm



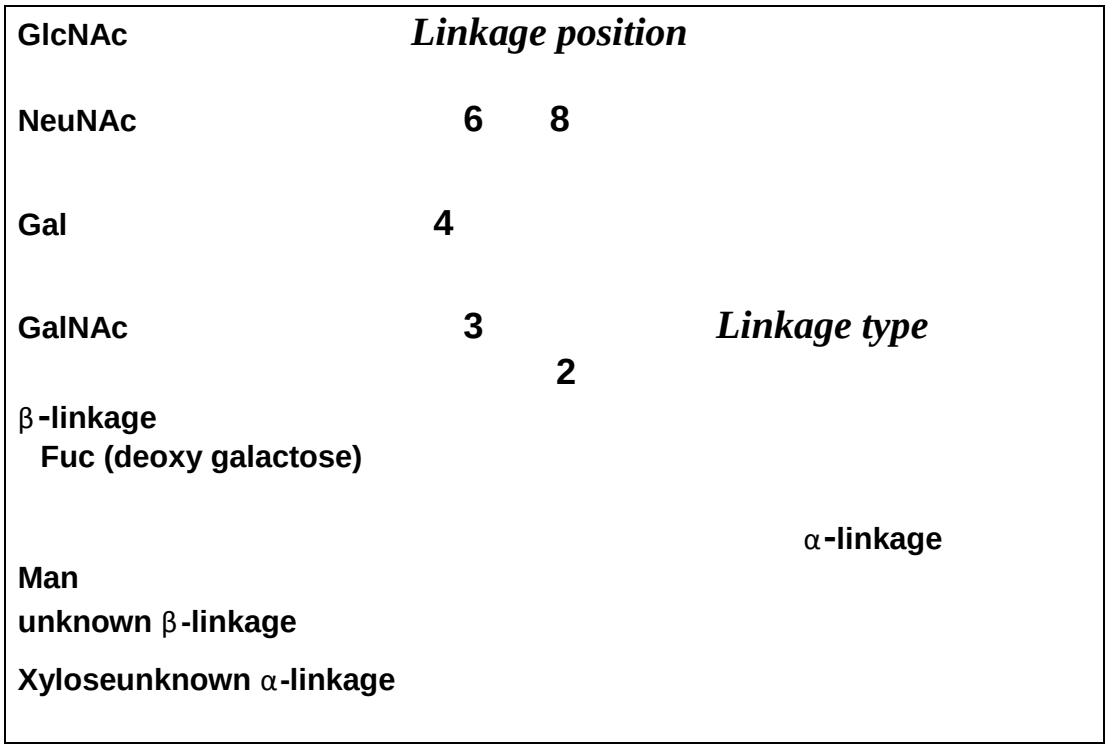


Figure 2: GlycoBase glycan structure key.