Certificate of Analysis

LudgerPure™ Procainamide Labeled NGA3 Glycan

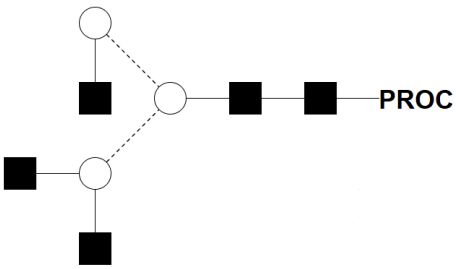
Cat. #: CPROC-NGA3-01
Size: approx. 20 pmol

Batch: C11S-04
Expiry Date: 28 Jan 2025

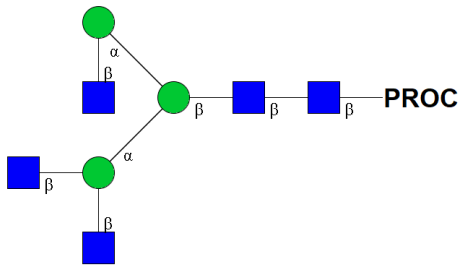
Alternative Names

A3

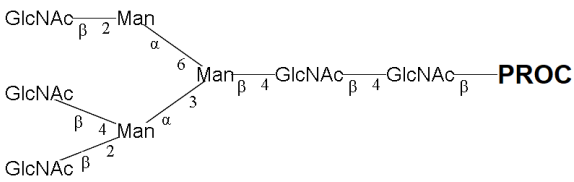
Glycan Structure



Oxford Notation



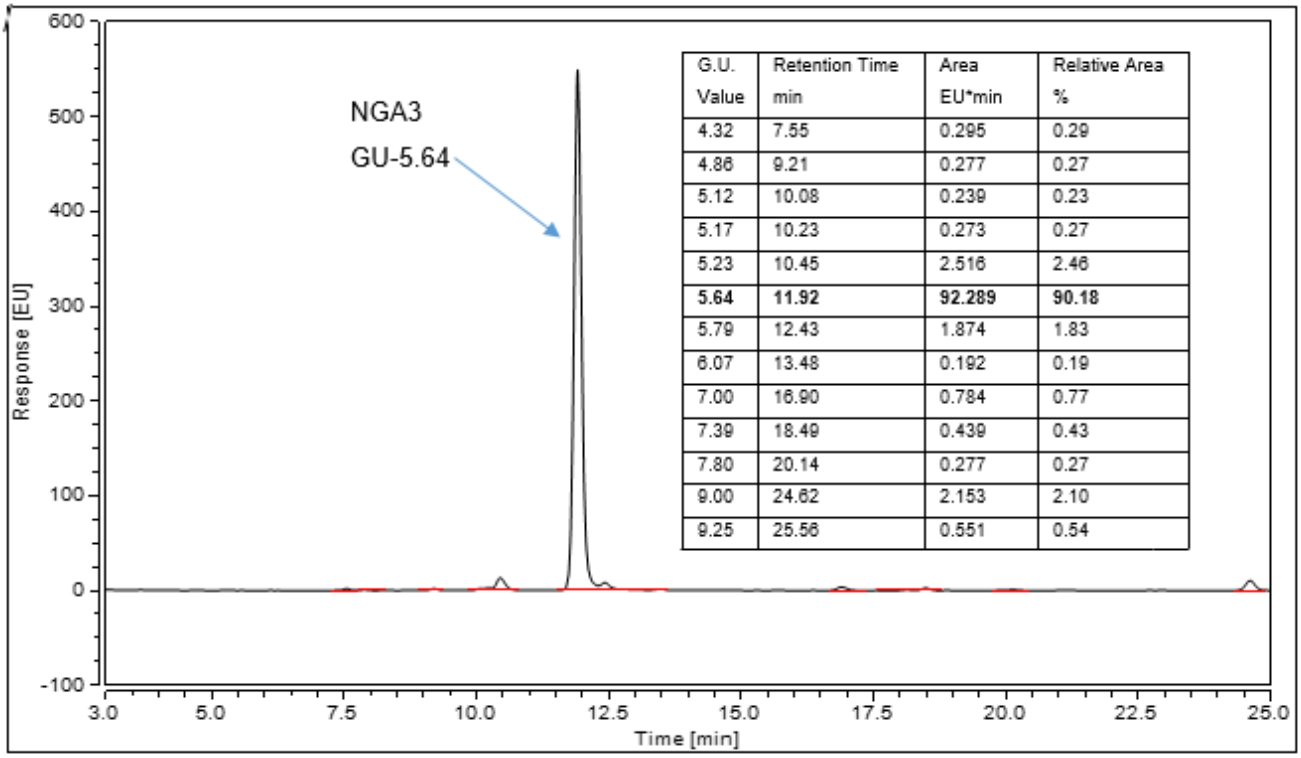
CFG Notation



Text Notation

Purity: 90% PROC labeled NGA3 glycan, as assessed by HPLC - see Fig 1.

Amount: Sample vial determined to contain 21 pmols NGA3 glycan – Test performed 01 Feb 2021.



G.U. Value	Retention Time min	Area EU*min	Relative Area %
4.32	7.55	0.295	0.29
4.86	9.21	0.277	0.27
5.12	10.08	0.239	0.23
5.17	10.23	0.273	0.27
5.23	10.45	2.516	2.46
5.64	**11.92**	**92.289**	**90.18**
5.79	12.43	1.874	1.83
6.07	13.48	0.192	0.19
7.00	16.90	0.784	0.77
7.39	18.49	0.439	0.43
7.80	20.14	0.277	0.27
9.00	24.62	2.153	2.10
9.25	25.56	0.551	0.54

Figure 1: *HILIC HPLC profile of PROC labelled NGA3 glycan (see method conditions below) (Cat. #: CPROC-NGA3-01, Batch C11S-04).*

**NGA3 glycan structure identified by MS & HPLC (GU value comparison to GlycoBase). This structure is drawn according to the scheme developed by Oxford-Dublin Glycobiology Laboratory (see Fig 3).*

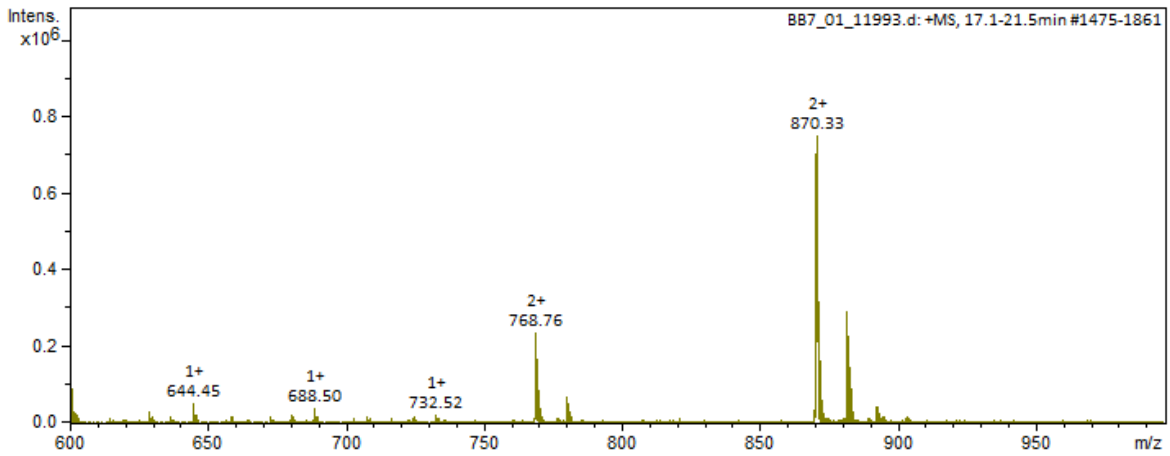


Figure 2: *Positive ion mass spec analysis of labelled Glycan Sample. Main peak at m/z 870.3 conforms to expected* $[M+2H]^{2+}$ *mass. No significant unlabelled glycan peak present. (Cat. #: CPROC-NGA3-01, Batch C11S-04).*

PROC NGA3 peak seen above, eluted at 11.92 minutes, under the following 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	Flow (ml/min)
0.0	76.0	0.40
55.30	40.0	0.25
57.50	40.0	0.25
59.5	76.0	0.25
65.50	76.0	0.25
66.50	76.0	0.40
70.00	76.0	0.40

Detector: Fluorescence

Excitation wavelength: 250 nm

Emission wavelength: 428 nm

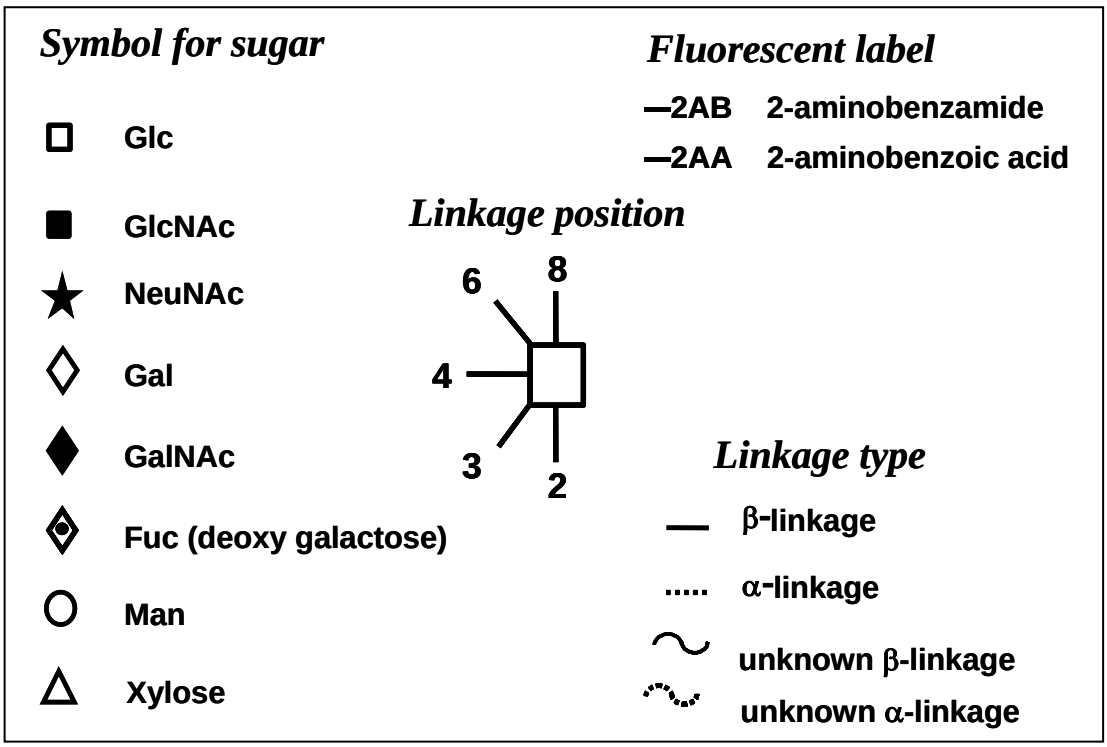


Figure 3: *GlycoBase glycan structure key.*