

## Certificate of Analysis

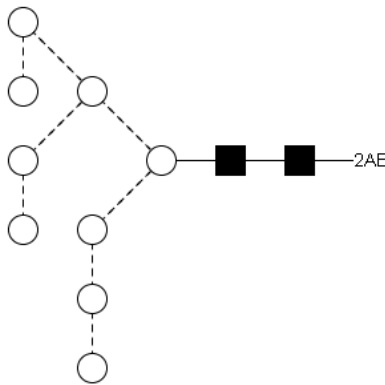
### LudgerPure™ 2AB Labeled MAN9 Glycan

Cat. #: CAB-MAN9-01

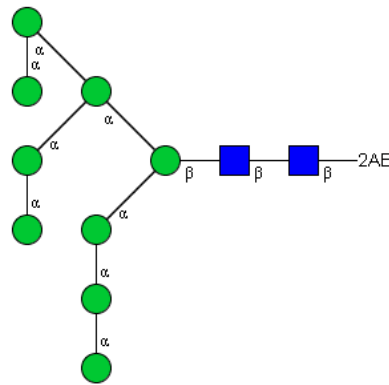
Batch: A56F-01

Size: approx. 100 pmol

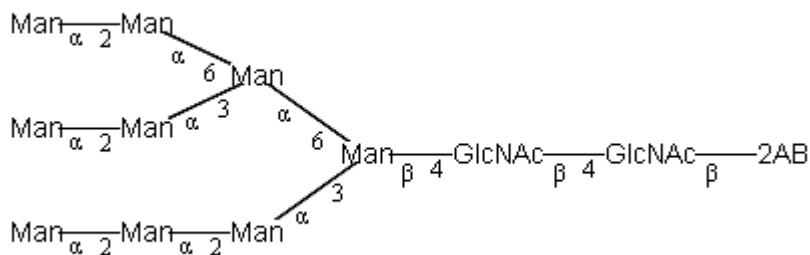
#### Structure



Oxford Notation



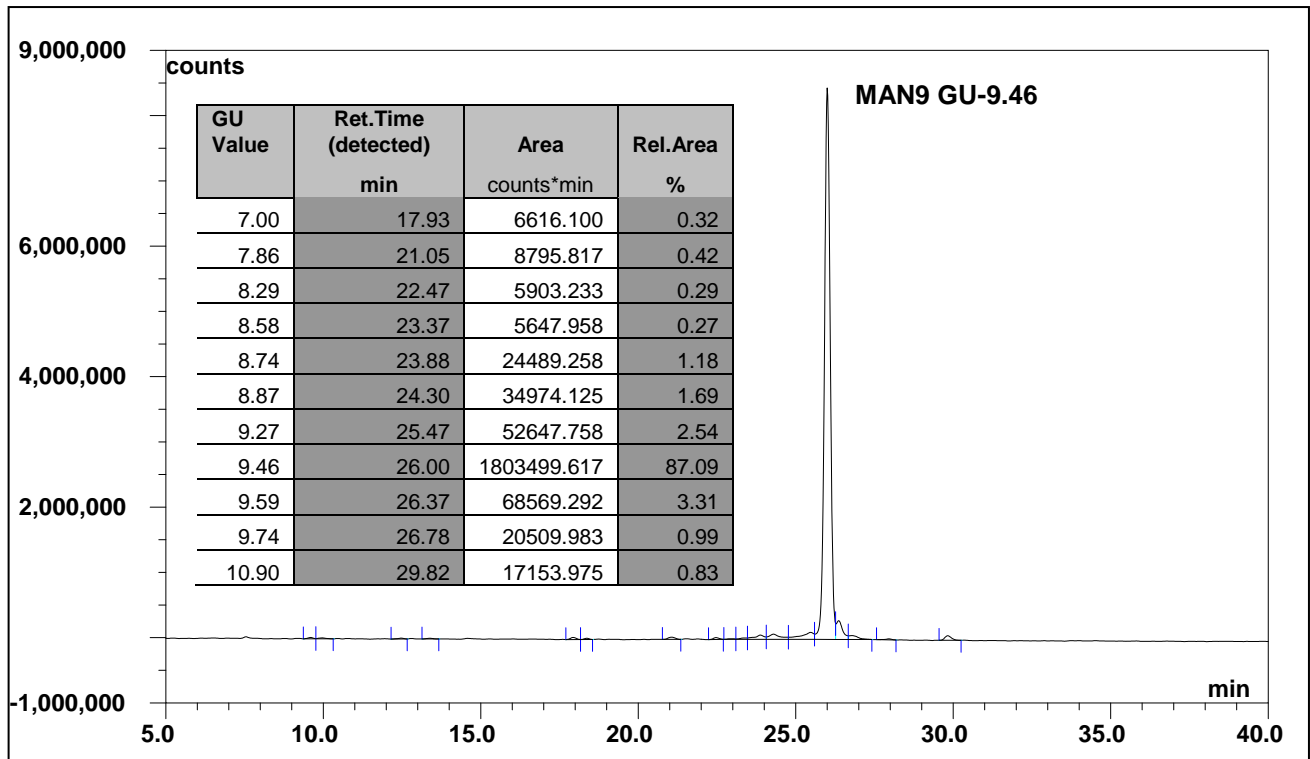
CFG Notation



Text Notation

**Purity:** 87.1% 2AB labeled MAN9 glycan, as assessed by HPLC - see Fig 1.

**Amount:** Sample vial determined to contain 136 pmols MAN9 glycan – Test performed 22 Apr 2013.



**Figure 1:** HILIC HPLC profile of 2AB labelled MAN9 glycan (see method conditions below)  
 (Cat. #: CAB-MAN9-01, Batch A56F-01).

*\*MAN9 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).*

**2-AB MAN9 peak seen above, eluted at 26.0 minutes, under the following conditions:**

**HPLC Running Conditions:**

Column: Waters BEH Glycan 1.7 $\mu$ m column (150mm)

Flow: See table below.

Temperature: 60 °C

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

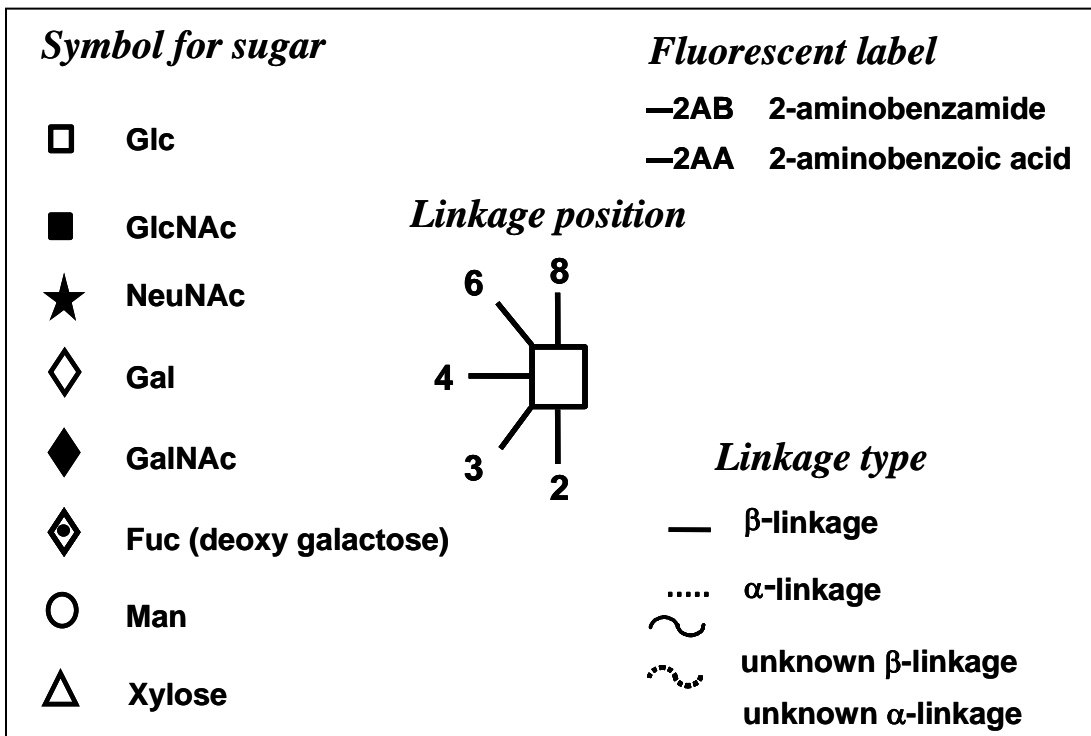
Gradient:

Time (min)	%B	Flow rate (mL/min)
0.0	78.0	0.50
38.5	55.9	0.50
40.5	0.0	0.25
42.5	0.0	0.25
44.5	78.0	0.25
50.5	78.0	0.25
51.5	78.0	0.50
55.0	78.0	0.50

Detector: Dionex FLD-3000

Excitation wavelength: 330 nm

Emission wavelength: 420 nm



**Figure 2:** GlycoBase glycan structure key.