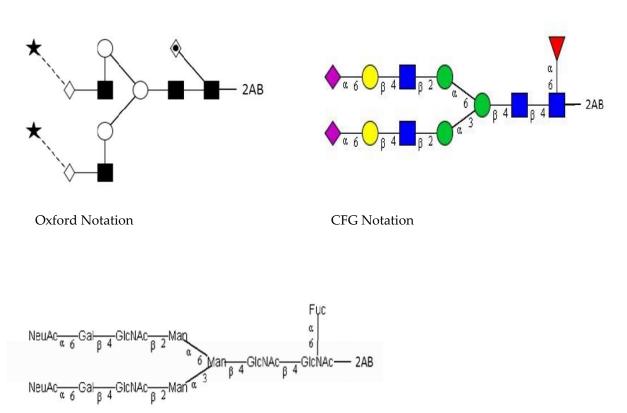


Certificate of Analysis

LudgerPure[™] 2AB Labeled A2F Glycan

Cat. #: CAB-A2F-01 Size: approx. 100 pmol Batch: B381-02 Expiry: 1st Aug 2018

Structure



Text Notation

Purity: 97.47% 2AB labeled A2F glycan, as assessed by UHPLC - see Fig 1.

Amount: Sample vial determined to contain 109.9 pmols A2F glycan – Test performed 2nd August 2013.



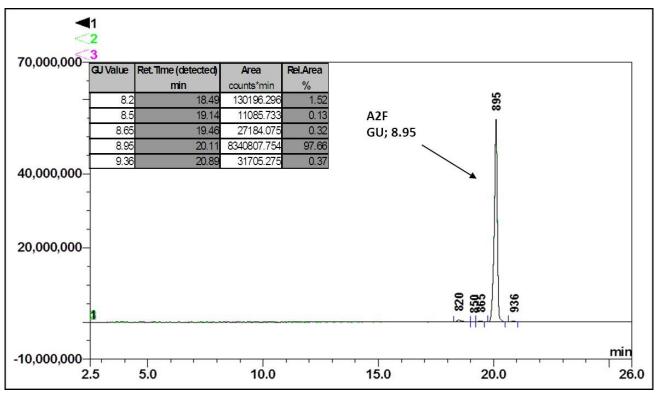


Figure 1: HILIC HPLC profile of 2AB labelled A2F glycan (see method conditions below) (Cat. #: CAB-A2F-01, Batch B381-02).

*A2F 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 A2F peak seen above, eluted at 20.11 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 Gradient:

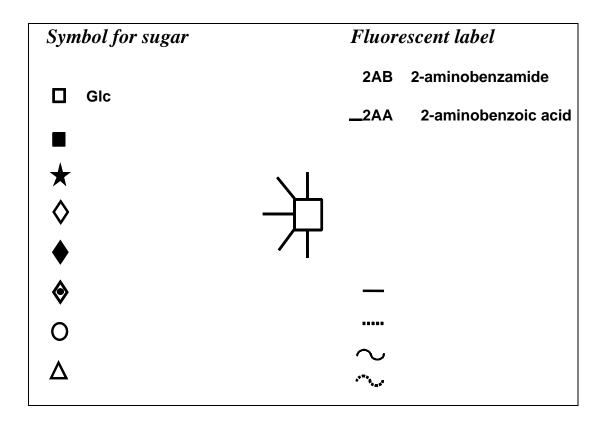
Solvent B: 100 % acetonitrile

Time	%В		
(min)			
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



GICNAC	Linkag	e position	
NeuNAc	6	8	
Gal	4		
GalNAc β-linkage	3	2	Linkage type
Fuc (deoxy galactose)			
Man			α -linkage
unknown β-linkage			
Xyloseunknown α -linkage			

Figure 2: GlycoBase glycan structure key.