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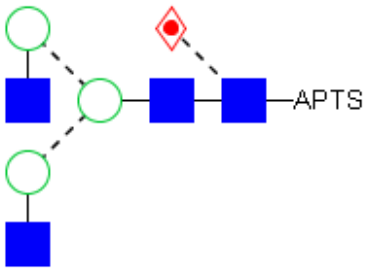
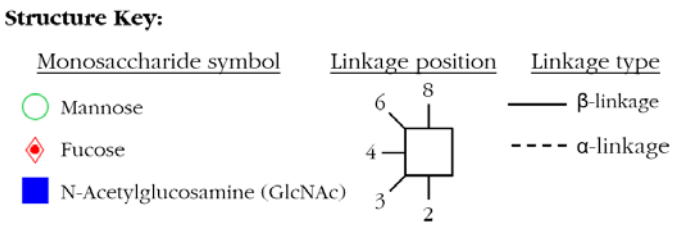
CERTIFICATE OF ANALYSIS

PRODUCT NAME:	GLYKO® APTS NGA2F (G0F)
PRODUCT CODE:	GKSP-302
GLYCAN NAME:	Asialo-, agalacto-,biantennary, core substituted with fucose (NGA2F)
LOT NUMBER:	P14A1702a
PACK SIZE:	60 pmol (qualitative capillary electrophoresis standard for glycan identification)
PURITY:	≥85% by capillary electrophoresis
FORM:	Dry solid
STORAGE:	Store at -20°C in the dark before and after reconstitution
EXPIRATION:	November 2023, may be used for 3 months after reconstitution (extended from prior exp. date based on re-assay)
RE-ASSAY DATE:	November 2018
STRUCTURE[1,2]:	The reducing terminus of NGA2F is derivatized with the fluorescent dye, APTS (8-Aminopyrene-1,3,6-trisulfonate).





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Quality Control:

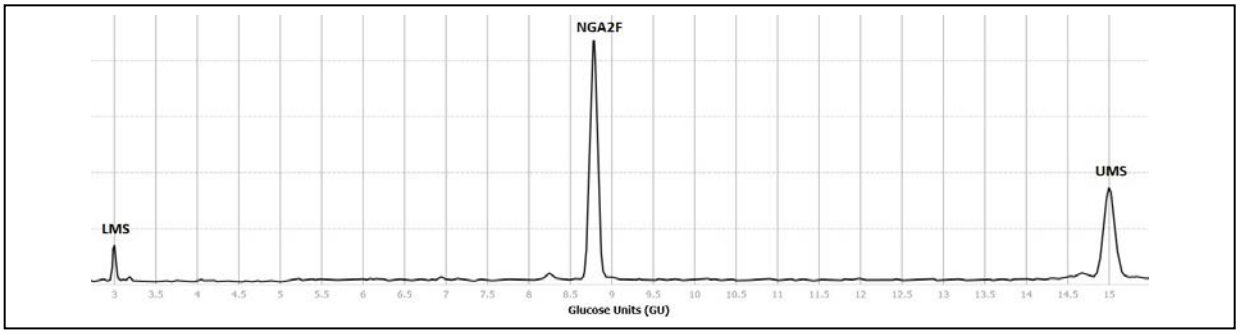

Figure 1 – Gly-Q™ Results: The APTS labeled standard is injected onto a Gly-Q capillary electrophoresis (CE) Instrument (GQ2100) under the conditions and method below (see Directions for Use for recommended amounts). Gly-Q Migration Standards (GKSQ-500) are co-injected with the glycan:

METHOD:

Action	High Voltage	Duration, seconds	Position	Sampling Interval, Seconds
High Voltage Purge	4.00	10.00	Wash	0.04
Pause		2.00	Clean	
Reagent Block Injection	2.00	2.00	MA02	0.04
Pause		2.00	Clean	
Well Plate Injection	2.00	2.00	Sample	0.04
Pause		2.00	Clean	
Separation & Detection	10.00	120.00	Separation	0.04

Structural Analysis: The purity and structural integrity of the glycan was assessed by CE analysis. The identity of the unlabeled glycan library is confirmed by MALDI-TOF[3,4] mass spectrometry or LC-MS. Agreement was found between the CE results and published GU values[5].

Application:

- Qualitative reference standard for CE separation and identification of N-glycan structures labeled with APTS.

Handling & Reconstitution: The labeled oligosaccharide library is shipped as a dried solid. Use ultra-pure water or an aqueous buffer to dissolve the materials (see Directions for Use for suggested volumes).

Allow the unopened vial to reach ambient temperature and tap on a solid surface to ensure that most of the material is at the bottom of the vial. Gently remove the cap, add the desired volume of ultra-pure water or aqueous buffer, re-cap and mix thoroughly to redissolve all the material. For maximal recovery, ensure that the cap lining is also rinsed. Centrifuge the reconstituted vial briefly before use.

Make sure that any glassware, plasticware, solvents or reagents used are free of glycosidases and carbohydrate contaminants.

Minimize exposure to elevated temperatures or extremes of pH. Store the reconstituted glycan library at -20° C. Allow the vial to equilibrate to ambient temperature before use. Avoid multiple freeze/thaw cycles.

Directions For Use: For our Quality Control testing, the dried glycan was dissolved in 100 µl of water and an aliquot was then further diluted (typically 1:100). 100 µl of the diluted glycan was transferred to a well of a 96-well PCR plate and replicate runs were processed on a Gly-Q CE Instrument (GQ2100). Typically, ~30 injections are obtained from a 50 µl sample using this method. When using electrokinetic injection, signal decrease can occur over repeated injections from the same aliquot. Conditions may vary for other CE systems, for assistance please contact technical support at:

info@prozyme.com

REFERENCES

1. Ceroni A, Maass K, Geyer H, Geyer R, Dell A, Haslam SM. GlycoWorkbench: a tool for the computer-assisted annotation of mass spectra of glycans. J Proteome Res. 2008 Apr; 7(4): 1650-9.

2. Harvey DJ, Merry AH, Royle L, Campbell MP, Dwek RA, Rudd PM. Proposal for a standard system for drawing structural diagrams of N– and O-linked carbohydrates and related compounds. Proteomics 2009 Aug; 9(15): 3796-801.

3. James DC and Jenkins N. Analysis of N-glycans by matrix-assisted laser desorption/ionization mass spectrometry; in A laboratory guide to glycoconjugate analysis. BioMethods (P. Jackson and J. T. Gallagher, ed) 1997; 9:91-112.

4. Papac DI, Wong A and Jones AJS. Analysis of acidic oligosaccharides by matrix-assisted laser desorption/ionization time of flight mass spectrometry. Anal Chem 1996 Sep 15; 68(18):3215-3223.

5. Mittermayr S, Bones J, Doherty M, Guttman A and Rudd PM. Multiplexed analytical glycomics: rapid and confident IgG N-Glycan elucidation. J Proteome Res. 2011 Aug 5; 10(8):3820-9.

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