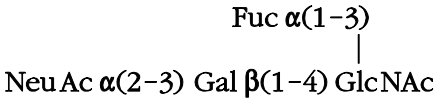
CERTIFICATE OF ANALYSIS

PRODUCT NAME:	GLYKO® 3'-SIALYL-LEWIS x (3'-SLe^X)
PRODUCT CODE:	GKAD-00126
LOT NUMBER:	DP13B0601
PACK SIZE:	100 µg (qualitative standard for glycan identification)
PURITY:	≥90% of glycan by UPLC®
FORM:	Dry solid
STORAGE:	Store at -20°C before and after reconstitution
EXPIRATION:	August 2018, may be used for 1 year after reconstitution

STRUCTURE:



3832 Bay Center Place
Hayward, CA 94545-3619

TOLL FREE (800) 457-9444
PHONE (510) 638-6900
FAX (510) 638-6919

E-MAIL info@prozyme.com
WEB www.prozyme.com

Quality Control:

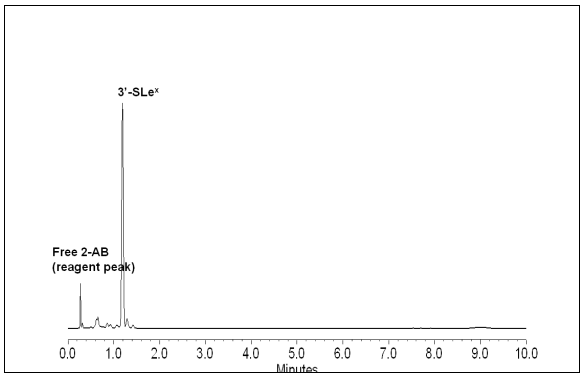


Figure 1 - **UPLC® results**: 3'-SLe^x was labeled according to the Signal™ 2-AB Labeling Kit (GKK-404) and analyzed on an ACQUITY® UPLC BEH Glycan column (1.7 μm, 2.1 x 100 mm) in ammonium formate/acetonitrile.

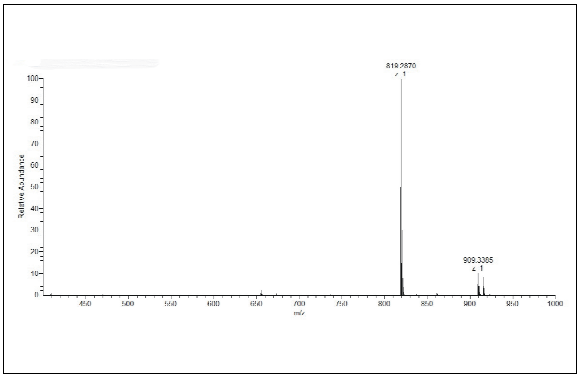


Figure 2 - ESI-MS of 3'-SLe^x $[M - H]^-$

Molecular Weight: 820.8 (average)[1]

Structural Analysis: The purity and structural integrity of the glycan is assessed by one or more of the following techniques: UPLC, HPLC[2], mass spectrometry[3,4], FACE[5], ^{1}H-NMR[6] and HPAEC-PAD[7].

Reconstitution: Use HPLC-grade water or an aqueous buffer to dissolve the glycan. Store the reconstituted glycan at -20°C in working aliquots. Avoid multiple freeze/thaw cycles.

Handling: The oligosaccharide is shipped as a dried solid. 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 water or buffer, re-cap and mix thoroughly to redissolve all the oligosaccharide. For maximal recovery, ensure that the cap lining is also rinsed, and centrifuge the reconstituted vial briefly before use.

Make sure that any glassware, plasticware, solvents or reagents which come into contact with the glycan are free of glycosidases and carbohydrate contaminants.

Minimize exposure to elevated temperatures or extremes of pH.

Applications:

- As a standard for various HPLC and other chromatographic and analytical procedures. (Note: The unreduced form of 3'-Sialyl-Lewis x is labile under extremes of acidic or alkaline conditions with several decomposition products forming particularly under alkaline conditions).
- For establishing the specificity of lectins and monoclonal antibodies
- For radio-labeling, fluorescent-labeling or formation of a variety of oligosaccharide derivatives
- As a model compound for cell-cell interaction studies
- As an example of 3'Sialyl-Lewis x determinant in inhibition studies

REFERENCES

1. Average molecular weight was calculated using the ExPASy GlycanMass calculator: http://web.expasy.org/glycanmass/

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3. James DC and Jenkins N. Analysis of N-glycans by matrix-assisted laser desorption/ionization mass spectrometry. In: Jackson P, Gallagher JT, editors. A laboratory guide to glycoconjugate analysis, BioMethods Vol. 9. Basel: Birkhäuser; 1997. p. 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.

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7. Townsend RR, Hardy MR, Hindsgaul O and Lee YC. High-performance anion-exchange chromatography of oligosaccharides using pellicular resins and pulsed amperometric detection. Anal Biochem 1988 Nov 1;174(2):459-70.

Vicki S. Woolworth
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Authorized Signature