

Product Description

$^{13}\text{C}_8$ - labeled mono-sialylated, galactosylated biantennary complex N-glycan

ILGA13S23-600pm (3×200 pmol)

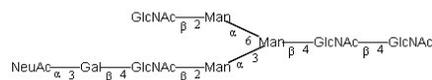
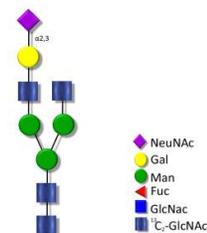
N-Glycan labeled with ^{13}C , for use as a quantitative standard in applications such as Matrix-assisted Laser Desorption Ionization-time-of-flight (MALDI-TOF), Electrospray Ionization (ESI) and Liquid Chromatography Mass Spectrometry (LC-MS).

- Alternative glycan names: **G1S1, A2G1S1**
- Exact Mass: 1777.6616
- Sample volume: 30 μL
- Sample concentration: 20 μM
- ^{13}C - isotopic purity: 99.1%
- Purity: 98% (UPLC-FLD after 2-AB labeling)

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CarboQuant**N-Glycan A1(3)S(2,3)**

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INSTRUCTIONS

Instructions for **CarboQuant** standards samples (3×200 pmol / 10×200 pmol).

- Upon arrival store **CarboQuant** standards solutions at 4 °C.
- Centrifuge the vial before opening at 1,000 x g for 1 minute. (To dislodge any material that may be dispersed on the wall or cap of the vial).
- Add 10 µL of the labeled glycan standard (200 pmol) to the glycan mixture and re-cap the vial immediately.
- For MALDI applications is recommended to add any Na⁺ ion rich reagent or K⁺ suppression reagent as NaOH or sodium citrate to avoid glycan K⁺ adducts in the MALDI spectra.

Stored at 4 °C **CarboQuant** standards are stable >1 year without significant loss of purity.

Introduction

CarboQuant standards are synthetic ¹³C-labeled N-glycans, produced entirely in our laboratory for use as internal standards in absolute glycan quantification by mass spectrometry^[1]. They are available as single standards or in kit form including a quantification software and all reagents and consumables required for glycan analysis.

CarboQuant standards are provided as quantified (qNMR) aqueous solution in two formats of 600 pmol and 1000 pmol.

Advantages of CarboQuant standards:

- Label-free glycan quantification by MS
- Absolute quantification of individual glycans in complex mixtures (e.g. glycan biomarkers)
- No external calibration required, use as internal standard due to stable isotope enrichment
- Standards are quantified by qNMR
- Custom-made software for rapid automated quantification available
- Stable isotope enrichment in glycan core and antennae for fragment quantification
- Degree of isotopic enrichment can be tuned during synthesis
- Standards provided as single isomers, no isobaric mixtures
- Fully synthetic and characterized by NMR, HPLC and MS, high purity (>95%)
- Custom synthesis of standards offered
- Compatible with labeling by reductive amination, permethylation, sialic acid derivatisation

Applications:

- Measure serum glycan levels as disease markers by MS
- Quantify absolute and relative glycosylation in biopharmaceutical development and quality control
- Glycan biomarker discovery by MALDI (cross-quantification)
- Increase reproducibility in Lab-to-lab method transfer (internal calibration standard)
- De-convolute and quantify co-eluting peaks in LC-MS
- Quantify glycan recovery after sample preparation
- Protein characterization