

**Product Description**

$^{13}\text{C}_8$  - labeled asialo, galactosylated biantennary complex N-glycan  
ILGG2-600pm (3×200 pmol)

N-Glycan labeled with  $^{13}\text{C}$ , 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).

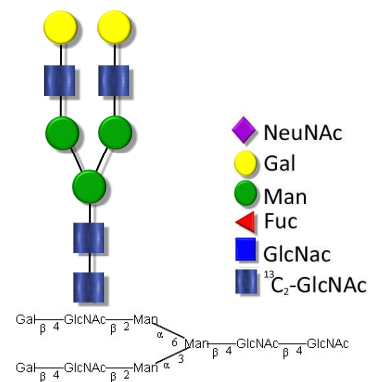
- Alternative glycan names: G2, A2G2
- Exact Mass: 1648.6190
- Sample volume: 30  $\mu\text{L}$
- Sample concentration: 20  $\mu\text{M}$
- $^{13}\text{C}$ - isotopic purity: 99.1%
- Purity: 100% (UPLC-FLD after 2-AB labeling)

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# CarboQuant

## N-Glycan G2

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complex N-glycan  
ILGG2-600pm (3×200 pmol)



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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<sup>+</sup> ion rich reagent or K<sup>+</sup> suppression reagent as NaOH or sodium citrate to avoid glycan K<sup>+</sup> 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 <sup>13</sup>C-labeled N-glycans, produced entirely in our laboratory for use as internal standards in absolute glycan quantification by mass spectrometry<sup>[1]</sup>. 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 2,000 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