

NucleoSyn provides custom

Stable Isotope (^2H , ^{15}N , ^{13}C) Labeled Compounds

to support projects
dedicated to:

- **Bioanalytics**
- **Omics research**
- **Molecular imaging**
- **Biomarker discovery**



CUSTOM STABLE ISOTOPE
LABELING SERVICES

LIFE SCIENCE
APPLICATIONS

STABLE ISOTOPE
LABELED COMPOUNDS

TYPICAL PRODUCT
PACKAGING

nucleoSyn

a Biosolve Group company

NucleoSyn provides custom Stable Isotope Labeled (SIL) Compounds

NucleoSyn, leading supplier of innovative DNA & RNA related products and synthetic lipids, launches new product line & services dedicated to support your bioanalytical, Omics and ADME/DMPK projects: Stable Isotope Labeled (SIL) Compounds.

For a variety of applications in Life Sciences

 ^2H

Stable Isotope Labeled Compounds used as:

Tracers in metabolism and Omic studies using **mass spectrometry or NMR spectroscopy**

Internal standards in **quantitative bioanalysis** by LC / MS

Tools to enhance PK of drugs, drug candidates (**Deuterium medicinal chemistry**)

Tracers for assessing **absolute bioavailability** of drug candidate

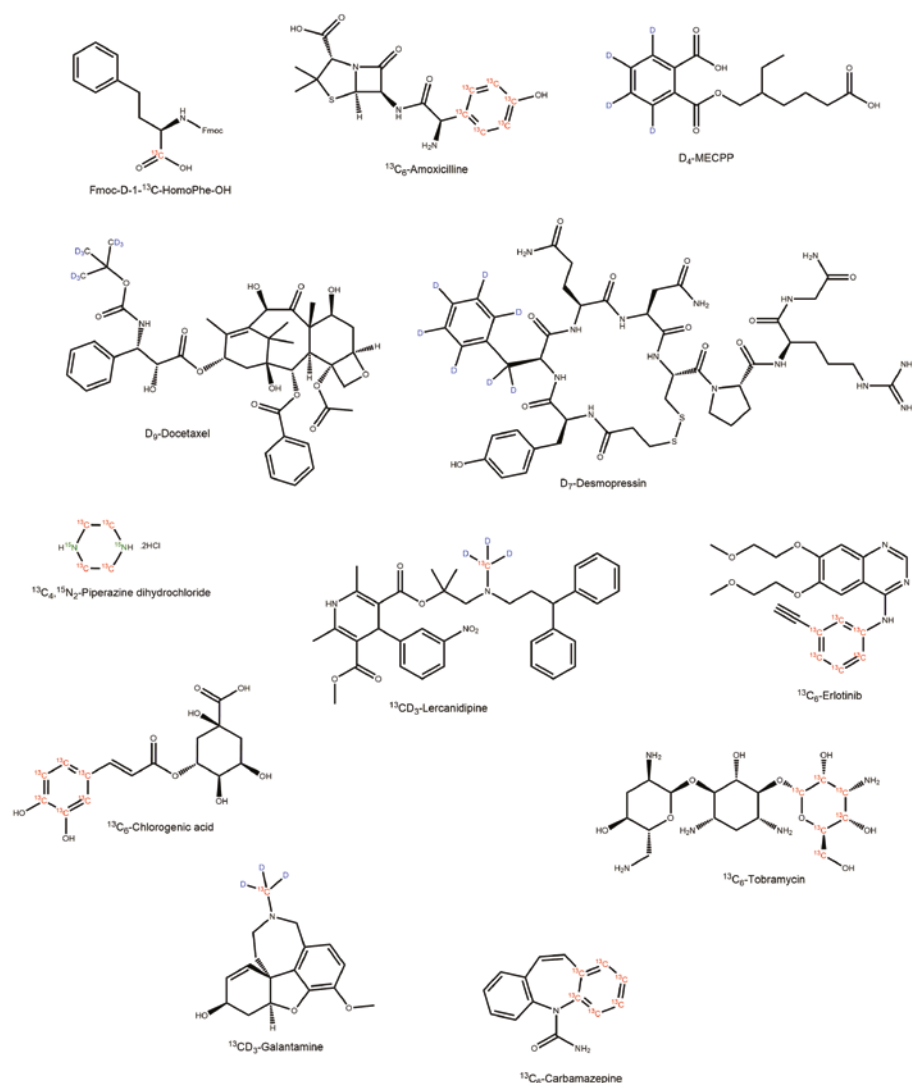
+ and more...

 ^{15}N ^{13}C

Custom Stable Isotope Labeling Services

- **Experience of labeling a wide range of chemotypes:** heterocycle, natural product, amino acid & peptide...
- **Incorporation of isotopic labels** at specific positions of the compound, including site selective and multiple site selective schemes
- **For stable isotope dilution assays,** preferred labeled isotopes : ^{15}N & ^{13}C (Golden Standard) over ^2H labeling in order to ensure optimum co-elution with the unlabeled analytes and optimum isotopic purity
- **Custom ^2H , ^{15}N , ^{13}C ,** building blocks and reagents synthesis
- **Either with ^2H , ^{15}N or ^{13}C** or a combination of them

Stable Isotope Labeled Compounds (^2H , ^{15}N , ^{13}C) : Few examples



Typical Product Packaging

- Any size possible from μg to multigram quantities
- In pure form or standardized solution
- In low actinic amber color glassware (light sensitive product)
- Under argon (air sensitive product)

Shipment:

- Shipped cold (e.g. dry ice shipping for temperature sensitive product if necessary)
- Worldwide delivery

 ^2H ^{15}N ^{13}C

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Typical Certificate of Analysis (CoA) for Custom Stable Isotope Labeled Analytical Standard

CoA includes:

Title: CoA, name

Identification number (lot, batch)

Physical description, Identification & Purity assesment

Purity (chemical purity %w/w)

Recommended storage conditions

Expiry / retest date

Intended use

Address of issuing body

Issuance date with approval signature

Name of reference material in sufficient detail and structure

Isotopic purity / enrichment & Normalized isotopic mass distribution table

Test	Method	Result
Appearance	Visual	Light brown solid
Identification	¹ H NMR	Conforms
Identification	¹³ C NMR	Conforms
Identification	LR-MS (ESI+APCI, Negative Mode)	m/z [M-H] = 359.1 da
LC/LV/MS Purity	200-600nm / ESI+APCI Negative Mode	>99.5% / >98.5%
Chemical Purity	¹ H qNMR (quantitative NMR)	=96.8±0.8% w/w
Isotopic Purity	LR-MS (ESI+APCI, Negative Mode)	>99 atom % ¹³ C (0% MO)

m/e	Abundance	m/e	Abundance
344.00	9.4	357.05	0.1
353.05	Undetected	358.15	5.9
354.10	Undetected	359.10	100.0
355.05	Undetected	360.05	11.3
356.10	Undetected	361.05	2.8

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