



TCA Cycle Mixtures

New!

For Qualification, Quantification,
and Systems Biology



The tricarboxylic acid (TCA) cycle, also known as the Krebs or citric acid cycle, plays an essential role in central carbon and energy metabolism. The study of its intermediates, and its ancillary compounds, has proven pivotal in not only understanding their impact on metabolism but also in profiling their function in oncogenesis, inflammation, and other pathologies.

To aid the analysis of TCA-associated compounds in metabolic studies, **Cambridge Isotope Laboratories, Inc. (CIL) is pleased to offer stable isotope-labeled and unlabeled TCA cycle mixes.** These formulations are dried down and comprise a collection of TCA cycle compounds as well as offshoot metabolites (see composition table below). The mixes can be used in untargeted and targeted LC-MS methods for applications ranging from quality control to quantification. Please visit isotope.com for pricing and availability.

Catalog No.	Description	Unit Size
MSK-TCA1	TCA Cycle Standard Mix 1	1 vial
MSK-TCA2	TCA Cycle Standard Mix 2	1 vial
MSK-TCA	TCA Cycle Standard Mix Set 1 and 2	2 × 1 vials
MSK-TCA1-US	TCA Cycle Standard Mix 1 (unlabeled)	1 vial
MSK-TCA2-US	TCA Cycle Standard Mix 2 (unlabeled)	1 vial
MSK-TCA-US	TCA Cycle Standard Mix Set 1 and 2 (unlabeled)	2 × 1 vials

Table: Composition of the isotopically labeled TCA mixtures. Reconstituting each vial in 1 mL of solvent (e.g., water) will provide an equimolar concentration of 100 µM. Note that the unlabeled TCA mix compositions are equivalent.

Compounds	Label and Enrichment	Mix No.
Fumaric acid, disodium salt	¹³ C ₄ , 99%	1
DL-2-Hydroxyglutaric acid, disodium salt	¹³ C ₅ , 99%	1
α-Ketoglutaric acid, disodium salt	1,2,3,4- ¹³ C ₄ , 99%	1
Malic acid, disodium salt monohydrate	¹³ C ₄ , 99%	1
Sodium L-lactate	¹³ C ₃ , 98% (20% w/w in H ₂ O)	1
Sodium pyruvate	¹³ C ₃ , 99%	1
Succinic acid, disodium salt	¹³ C ₄ , 99%	1
Trisodium citrate, hemihydrate	1,5,6-carboxy- ¹³ C ₃ , 99%	1
L-Aspartic acid	¹³ C ₄ , 99%	2
L-Glutamic acid	¹³ C ₅ , 99%	2
Isocitric acid, trisodium salt hydrate	3,4,5,6- ¹³ C ₄ , 98% (mixture of diastereomers)	2
Itaconic acid	¹³ C ₅ , 99%	2
Potassium phosphoenol pyruvate	2,3- ¹³ C ₂ , 99%	2

Compounds can also be obtained individually; please inquire.

Chemical purity (CP) is 98% or greater, unless otherwise indicated. For research use only. Not for use in diagnostic procedures.

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