
Product Data Sheet

Product Name: Isobutyryl-L-carnitine

Cat. No.: GC30728

Chemical Properties

Cas. No. 25518-49-4

SMILES CC(C)C(O[C@H](CC([O-])=O)C[N+](C)(C)C)=OFormula C₁₁H₂₁NO₄

M.Wt 231.29

Solubility DMSO: 250 mg/mL (1080.89 mM); Water: 125 mg/mL (540.45 mM)

Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available sizes: ship with RT, or blue ice upon request.

Structure **Background**

Isobutyryl-L-carnitine is a natural 4-carbon acylcarnitine that is involved in fatty acid oxidation and organic acid metabolism.¹ Elevated levels of isobutyryl-L-carnitine are associated with isobutyryl-CoA dehydrogenase deficiency.^{2,3}

1. Turer, A.T., Stevens, R.D., Bain, J.R., et al. Metabolomic profiling reveals distinct patterns of myocardial substrate use in humans with coronary artery disease or left ventricular dysfunction during surgical ischemia/reperfusion. *Circulation* 119(13):1736-1746 (2009)
2. Koeberl, D.D., Young, S.P., Gregersen, N., et al. Rare disorders of metabolism with elevated butyryl- and isobutyryl-carnitine detected by tandem mass spectrometry newborn screening. *Pediatr. Res.* 54(2):219-223 (2003)
3. Rinaldo, P., Cowan, T.M., and Matern, D. Acylcarnitine profile analysis. *Genet. Med.* 10(2):151-156 (2008)

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA