Data Sheet (Cat.No.T5232)



3-Methyl-2-oxobutanoic acid

Chemical Properties

CAS No.: 759-05-7

Formula: C5H8O3

Molecular Weight: 116.12

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	3-Methyl-2-oxobutanoic acid (2-Oxoisovaleric acid) is an abnormal metabolite that arises from the incomplete breakdown of branched-chain amino acids. 3-Methyl-2-oxobutanoic acid is a neurotoxin, an acidogen, and a metabotoxin. A neurotoxin causes damage to nerve cells and nerve tissues. 3-Methyl-2-oxobutanoic acid is a keto-acid, which is a subclass of organic acids. Abnormally high levels of organic acids in the blood (organic acidemia), urine (organic aciduria), the brain, and other tissues lead to general metabolic acidosis.
Targets(IC50)	Others, Endogenous Metabolite

Solubility Information

Solubility DMSO: 30 mg/mL (258.36 mM),

(< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	8.6118 mL	43.0589 mL	86.1178 mL
5 mM	1.7224 mL	8.6118 mL	17.2236 mL
10 mM	0.8612 mL	4.3059 mL	8.6118 mL
50 mM	0.1722 mL	0.8612 mL	1.7224 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Yudkoff M, et al. Brain amino acid requirements and toxicity: the example of leucine. J Nutr. 2005 Jun; 135(6 Suppl): 15315-85.

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