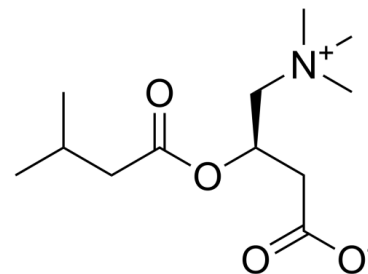


## Data Sheet

<b>Product Name:</b>	Isovalerylcarnitine
<b>Cat. No.:</b>	CS-0059341
<b>CAS No.:</b>	31023-24-2
<b>Molecular Formula:</b>	C <sub>12</sub> H <sub>23</sub> NO <sub>4</sub>
<b>Molecular Weight:</b>	245.32
<b>Target:</b>	Endogenous Metabolite; Proteasome
<b>Pathway:</b>	Metabolic Enzyme/Protease
<b>Solubility:</b>	DMSO : 50 mg/mL (203.82 mM; Need ultrasonic); H <sub>2</sub> O : 100 mg/mL (407.63 mM; Need ultrasonic)



### BIOLOGICAL ACTIVITY:

Isovalerylcarnitine is a product of the catabolism of L-leucine. Isovalerylcarnitine is also a selective and reversible **calpain** activator that induces apoptosis<sup>[1][2][3]</sup>. **In Vitro:** Isovalerylcarnitine produces an early and marked increase in phagocytosis and also in cell killing, as well as reduces proliferation, in U937 leukemic cells<sup>[2]</sup>.

### References:

- [1]. Pontremoli S, et al. Isovalerylcarnitine is a specific activator of calpain of human neutrophils. *Biochem Biophys Res Commun.* 1987 Nov 13;148(3):1189-95.
- [2]. Ferrara F, et al. Evaluation of carnitine, acetylcarnitine and isovalerylcarnitine on immune function and apoptosis. *Drugs Exp Clin Res.* 2005;31(3):109-14.
- [3]. Pontremoli S, et al. Isovalerylcarnitine is a specific activator of the high calcium requiring calpain forms. *Biochem Biophys Res Commun.* 1990 Feb 28;167(1):373-80.

### CAIndexNames:

1-Propanaminium,3-carboxy-N,N,N-trimethyl-2-(3-methyl-1-oxobutoxy)-,inner salt,(2R)-

### SMILES:

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

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

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