
Product Data Sheet

Product Name: L-Leucine 4-methoxy- β -naphthylamide (hydrochloride)

Cat. No.: GC13454

Chemical Properties

Cas. No. 4467-68-9

Chemical Name (S)-2-amino-N-(4-methoxy-2-naphthalenyl)-4-methyl-pentanamide, monohydrochloride

SMILES COC1=CC(NC([C@H](CC(C)C)N)=O)=CC2=CC=CC=C21.ClFormula $C_{17}H_{22}N_2O_2 \cdot HCl$

M.Wt 322.8

Solubility ≤ 25 mg/ml in ethanol; 10mg/ml in DMSO; 20mg/ml in dimethyl formamide

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 size: ship with RT, or blue ice upon request.

Structure **Background**

L-Leucine 4-methoxy- β -naphthylamide is a substrate for aminopeptidase M and leucine aminopeptidase.

Aminopeptidases are enzymes catalyzing the cleavage of amino acids from the amino terminus (N-terminus) of proteins or peptides. Aminopeptidases are distributed widely throughout the animal and plant kingdoms and are present in various subcellular organelles, in cytosol, as well as membrane components.

In vitro: L-Leucine 4-methoxy- β -naphthylamide was identified as a cell-permeable substrate for aminopeptidase M and leucine aminopeptidase that was developed for intracellular analysis of protease activities [1]. In a previous method-developing study, peptide derivatives of 4-methoxy- β -naphthylamine including L-leucine 4-methoxy- β -naphthylamide were incubated in microtiter plates together with nitrosalicylaldehyde. Selectivity was achieved by running parallel assays containing inhibitors partially

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

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selective for each of peptide derivatives. This method was successfully validated by measurements in cells isolated from cathepsin B-/-, K-/-, and L-/- mice [2].

In vivo: Up to now, there is no animal in vivo data reported.

Clinical trial: So far, no clinical study has been conducted.

References:

- [1] Monis, B. ,Wasserkrug, H. and Seligman, A.M. Comparison of fixatives and substrates for aminopeptidase. *Journal of Histochemistry and Cytochemistry* 13(6), 503-509 (1965).
- [2] Rüttger, A. ,Mollenhauer, J.,Lser, R., et al. Microplate assay for quantitative determination of cathepsin activities in viable cells using derivatives of 4-methoxy- β -naphthylamide. *Biotechniques* 41(4), 469-473 (2006).

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