

CA 074

Catalogue Number : 1341058

RUO: For Research Use Only. Not for use in diagnostic procedures.

Product Information

Synonyms: CA-074, CA074

Chemical Name: (2S)-1-[(2S,3S)-3-methyl-2-[[[(2S,3S)-3-(propylcarbamoyl)oxirane-2-carbonyl]amino]pentanoyl]pyrrolidine-2-carboxylic acid

Molecular Formula: C₁₈H₂₉N₃O₆

Molecular Weight: 383.4

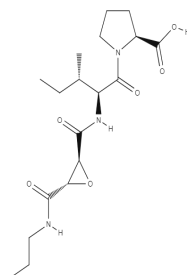
CAS Number: 134448-10-5

Purity: 98%

Applications: FA

Formulation: Crystalline solid

Storage: Product should be kept at -20°C.



Description

CA 074 is a selective cathepsin B inhibitor and synthetic analogue of E-64. It exhibits a 10 to 30 thousand times greater inhibitor effect on rat cathepsin B than on H and L. In the 4T1.2 model of breast cancer, CA 074 is reported to inhibit bone metastasis.

Preparation & Storage

Soluble in organic solvents such as methanol. It is soluble in methanol up to 1mg/ml.

References

- Withana, N. P., Blum, G., Sameni, M., Slaney, C., Anbalagan, A., Olive, M. B., ... & Sloane, B. F. (2012). Cathepsin B inhibition limits bone metastasis in breast cancer. *Cancer research*, 72(5), 1199-1209.
- Montaser, M., Lalmanach, G., & Mach, L. (2002). CA-074, but not its methyl ester CA-074Me, is a selective inhibitor of cathepsin B within living cells. *Biological chemistry*, 383(7-8), 1305-1308.
- Yamashima, T., Kohda, Y., Tsuchiya, K., Ueno, T., Yamashita, J., Yoshioka, T., & Kominami, E. (1998). Inhibition of ischaemic hippocampal neuronal death in primates with cathepsin B inhibitor CA074: a novel strategy for neuroprotection based on 'calpain-cathepsin hypothesis'. *European journal of neuroscience*, 10(5), 1723-1733.