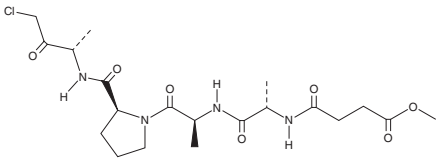
PRODUCT INFORMATION

MeOSuc-Ala-Ala-Pro-Ala-CMK

Item No. 42456

CAS Registry No.: 111682-13-4
Formal Name: N-(4-methoxy-1,4-dioxobutyl)-L-alanyl-L-alanyl-N-[(1S)-3-chloro-1-methyl-2-oxopropyl]-L-prolinamide
Synonyms: MeO-Suc-Ala-Ala-Pro-Ala-CH_2Cl, MSACK
Peptide Sequence: MeO-XAAPA-CH_2Cl (X = succinic acid)
MF: $C_{20}H_{31}ClN_4O_7$
FW: 474.9
Purity: ≥95%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

MeOSuc-Ala-Ala-Pro-Ala-CMK (MSACK) is supplied as a solid. A stock solution may be made by dissolving the MSACK in the solvent of choice, which should be purged with an inert gas. MSACK is soluble in organic solvents such as ethanol and DMSO. MSACK is sparingly soluble (1-10 mg/ml) in ethanol and soluble (≥10 mg/ml) in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of MSACK can be prepared by directly dissolving the solid in aqueous buffers. MSACK is soluble (≥10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

MSACK is a peptide inhibitor of polymorphonuclear leukocyte (PMN) and pancreatic elastases (IC_{50}s = 2.8 and 15.2 µM, respectively, for the human enzymes).[1] It inhibits PMN elastase-mediated collagen cleavage in isolated porcine articular cartilage.[2] MSACK decreases serum amylase levels and leukocyte pancreatic infiltration in a rat model of cerulein-induced acute pancreatitis.[1] It also reduces E-cadherin cleavage and myeloperoxidase (MPO) activity in rat pancreatic lysates prepared from the same model.

References

1. Mayerle, J., Schnekenburger, J., Krüger, B., *et al.* Extracellular cleavage of E-cadherin by leukocyte elastase during acute experimental pancreatitis in rats. *Gastroenterology* **129(4)**, 1251-1267 (2005).
2. Hilbert, N., Schiller, J., Arnhold, J., *et al.* Cartilage degradation by stimulated human neutrophils: Elastase is mainly responsible for cartilage damage. *Bioorg. Chem.* **30(2)**, 119-132 (2002).

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