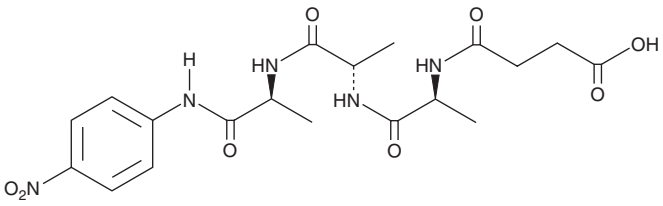
PRODUCT INFORMATION

Suc-Ala-Ala-Ala-*p*NA

Item No. 36478

CAS Registry No.:	52299-14-6
Formal Name:	N-(3-carboxy-1-oxopropyl)-L-alanyl-L-alanyl-N-(4-nitrophenyl)-L-alaninamide
Synonyms:	Elastase Substrate VIII, Suc-AAA-*p*NA, Suc-AAA-*p*-nitroanilide, Suc-Ala-Ala-Ala-*p*-nitroanilide
MF:	$C_{19}H_{25}N_5O_8$
FW:	451.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 222, 315 nm
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

Suc-Ala-Ala-Ala-*p*NA is supplied as a solid. A stock solution may be made by dissolving the Suc-Ala-Ala-Ala-*p*NA in the solvent of choice, which should be purged with an inert gas. Suc-Ala-Ala-Ala-*p*NA is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of Suc-Ala-Ala-Ala-*p*NA in these solvents is approximately 5 and 3 mg/ml, respectively. Suc-Ala-Ala-Ala-*p*NA is slightly soluble in ethanol.

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 Suc-Ala-Ala-Ala-*p*NA can be prepared by directly dissolving the solid in aqueous buffers. The solubility of Suc-Ala-Ala-Ala-*p*NA in PBS (pH 7.2) is approximately 0.3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Suc-Ala-Ala-Ala-*p*NA is a colorimetric substrate for elastase.[1,2] Elastase binds and hydrolyzes Suc-Ala-Ala-Ala-*p*NA to release *p*-nitroanilide (*p*NA), which can be quantified by colorimetric detection at 405 nm as a measure of elastase activity.

References

1. El Maaiden, E., Bouzroud, S., Nasser, B., *et al.* A comparative study between conventional and advanced extraction techniques: Pharmaceutical and cosmetic properties of plant extracts. *Molecules* **27(7)**, 2074 (2022).
2. Nadarajah, D., Atkinson, M.A.L., Huebner, P., *et al.* Enzyme kinetics and characterization of mouse pancreatic elastase. *Connect. Tissue Res.* **49(6)**, 409-415 (2008).

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