

Elastase, Porcine pancreas

Cat. No.:	HY-P2974
CAS No.:	39445-21-1
Molecular Formula:	C ₁₁₃₅ H ₁₇₅₉ N ₃₃₁ O ₃₄₆ S ₁₀
Molecular Weight:	25898.13
Sequence Shortening:	VVGGTEAQRNSWPSQISLQYRSGSSWAHTCGGTLIRQNWVMTAAHCVDRELTFRVWGEHNL NQNNNGTEQYVGQKIVVHPYWNDDVAAGYDIALRLAQSVTLNSYVQLGVLPAGTILANNSP CYITGWGLTRTNGQLAQLQAYLPTVDYAICSSSSYWGSTVKNSMVCAGGNGVRSQCQGDS GGPLHCLVNGQYAVHGVTSFVSRLGCNVTRKPTVFRVSAYISWINNVIASN (Disulfide bridge : Cys30-Cys46; Cys127-Cys194; Cys158- Cys174; Cys184- Cys214)
Target:	Elastase
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

Elastase, Porcine pancreas

SOLVENT & SOLUBILITY

In Vitro

H₂O : 50 mg/mL (1.93 mM; ultrasonic and adjust pH to 9 with NaOH)
H₂O : ≥ 5 mg/mL (0.19 mM)
* "≥" means soluble, but saturation unknown.

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		0.0386 mL	0.1931 mL	0.3861 mL
	5 mM		---	---	---
	10 mM		---	---	---

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Elastase, Porcine pancreas (EC 3.4.21.36) is a single polypeptide chain of 240 amino acid residues, derived from pig pancreas. Elastase, Porcine pancreas is a serine protease that can hydrolyze proteins and polypeptide. Elastase from porcine pancreas can induce emphysema in hamsters^{[1][2][3]}.

In Vitro

In-Solution Digestion Protocol

1. Resuspend Elastase in double-distilled water to a final concentration of 1 mg/mL. Store reconstituted Elastase at 4°C for up to 2 weeks.
2. Resuspend the protein in reaction buffer.
3. Add Elastase to protein solution; mix. We recommended using enzyme:protein ratios of 1:20 to 1:100.
4. Incubate 2-18 hours at 37°C.

	5. Stop the reaction by adding 10% formic acid or TFA to a final concentration of 0.5% or by heating at 95°C for 10 minutes. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Elastase from porcine pancreas induces emphysema in hamsters ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Phytother Res. 2024 Nov;38(11):5184-5202.
- medRxiv. 2025 May 21.

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REFERENCES

- [1]. Shotton DM, et, al. Amino-acid sequence of porcine pancreatic elastase and its homologies with other serine proteinases. Nature. 1970 Feb 28;225(5235):802-6.
- [2]. Teshima T, et, al. A new class of heterocyclic serine protease inhibitors. Inhibition of human leukocyte elastase, porcine pancreatic elastase, cathepsin G, and bovine chymotrypsin A alpha with substituted benzoxazinones, quinazolines, and anthranilates. J Biol Chem. 1982 May 10;257(9):5085-91.
- [3]. Stone PJ, et, al. Induction and exacerbation of emphysema in hamsters with human neutrophil elastase inactivated reversibly by a peptide boronic acid. Am Rev Respir Dis. 1990 Jan;141(1):47-52.

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

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