



G-Biosciences ♦ 1-800-628-7730 ♦ 1-314-991-6034 ♦ technical@GBiosciences.com

A Geno Technology, Inc. (USA) brand name

SG-Arginine-C™

(Cat. # 786-11)



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INTRODUCTION

SG-Arginine-C™ (Clostripain) is a sequencing grade sulfhydryl endopeptidase isolated from *Clostridium histolyticum*, which specifically hydrolyzes the carboxy peptide bond of arginine. It is produced in cultures of the bacterium *Clostridium histolyticum*, as an extracellular enzyme. As a sulfhydryl enzyme, SG-Arginine-C™ is susceptible to inactivation by oxidation and as a result requires reducing agents for protection. The enzyme also requires calcium ion for maximal activity. A special reconstitution buffer is supplied which contains reducing agents and activators to maintain enzyme activity. SG-Arginine-C™ has been modified chemically by a propriety process to render the enzyme resistant to autolysis and stabilize enzymatic activity. The modified enzyme retains 65-90% of its activity after 6 hours of incubation at 30°C in reaction buffer and 60-80% of activity after 24 hours incubation under the same conditions.

The chemically modified SG-Arginine-C™ is stable in denaturing agents (see Table) and therefore can be used to digest difficult to solubilize proteins.

Denaturing Agent	Concentration	% Retained Activity
Control	-	100
Urea	0.50M	100
	1.00M	100
	2.00M	100
Guanidine.HCl	0.05M	54
	0.10M	52
	0.25M	47
	0.50M	1.5

ITEM(S) SUPPLIED (CAT. # 786-11)

Description	Size
SG-Arginine-C™	1 vials, 2 x 10µg/vial
Digestion Buffer (ARG)	1 vial

STORAGE CONDITIONS

It is shipped at ambient temperature. Upon arrival, store at -20°C and is stable for 1 year.

PREPARATION BEFORE USE

NOTE: SG-Arginine-C™ is supplied lyophilized, 10µg/vial.

Reconstitute the enzyme with 100µl sterile water to produce a concentration of 100ng/µl. Combine 5µl of 100ng/µl solution with 95µl Digestion Buffer (ARG) to yield 5ng/µl Arginine-C. Reconstituted enzyme is stable for 1 month at -20°C, repeated freeze thawing is not recommended.

NOTE: If reduction is needed 250mM dithiothreitol is recommended. Do NOT alkylate sample with iodacetamide or iodoacetic acid. It will deactivate Arg-C enzyme

PROTOCOL

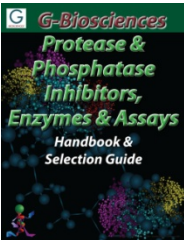
For optimal digestion make sure protein sample is either prepared or equilibrated in 50mM (NH₄)HCO₃ supplemented with 7.5mM dithiothreitol (DTT) and 1mM calcium acetate, pH 8.0.

1. For protein fragmentation, 5ng/µl SG-Arginine-C™ is typically added to the protein at a ratio of 1:10 to 1:20 enzyme to protein, by weight.
2. The incubation is allowed to proceed at 37°C for 2-10 hours, but can be extended to 24 hours in some applications.

NOTE: An optimum time for incubation can be obtained by adjusting the enzyme to sample ratio, taking into consideration that Arginine-C digestion activity is typically 100% that of trypsin.

RELATED PRODUCTS

Download our Protease & Phosphatase Inhibitors, Enzyme & Assays Handbook.



<http://info.gbiosciences.com/protease-phosphatase-inhibitors-enzymes-assay-handbook>

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Last saved: 11/06/2014 SM



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