



275PR-02

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A Geno Technology, Inc. (USA) brand name

SG-Glutamic-C™

(Cat. # 786-15)



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INTRODUCTION

SG-Glutamic-C™ is a sequencing grade serine endopeptidase, from *S. aureus* V8 that is highly specific for the cleavage of peptide bonds at the carboxy side of either aspartic or glutamic acid, depending on the buffer used. In ammonium bicarbonate or Tris-HCl buffer, in particular in the absence of phosphate ions, the enzyme is specific for the glutamyl site. Recommended buffers for fragmentation of proteins using this enzyme are 50mM Tris-HCl, pH 8.0 or bicarbonate buffer. SG-Glutamic-C™ has been modified chemically by a propriety process to render the enzyme resistant to autolysis and stabilize enzymatic activity. The modified enzyme retains 70-95% of its activity after 6 hours incubation at 30°C in reaction buffer and 65-90% of activity after 24 hours incubation under the same conditions. The chemically modified SG-Glutamic-C™ is stable in denaturing agents (see Table) and therefore can be used to digest difficult to solubilize proteins.

| Denaturing Agent | Concentration | % Enzyme Activity Retained |
|------------------|---------------|----------------------------|
| Control | - | 100 |
| Urea | 0.50M | 100 |
| Urea | 1.00M | 100 |
| Urea | 2.00M | 100 |
| Guanidine-HCl | 0.05M | 100 |
| Guanidine-HCl | 0.10M | 90 |
| Guanidine-HCl | 0.25M | 60 |
| Guanidine-HCl | 0.50M | 40 |
| Guanidine-HCl | 1.00M | 10 |

ITEM(S) SUPPLIED (Cat. # 786-15)

| Description | Size |
|------------------------|--------------------|
| SG-Glutamic-C™ | 2 vials, 10µg/vial |
| Digestion Buffer (GLU) | 2ml |

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-Glutamic-C™ is supplied lyophilized, 10µg/vial.

Reconstitute the enzyme with 20µl Digestion Buffer (GLU) to produce a concentration of 0.5µg/µl. Reconstituted enzyme is stable for one month at -70°C. Repeated freeze thawing is not recommended.

PROTOCOL

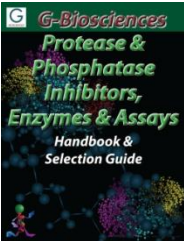
For optimal digestion make sure protein sample is either prepared or equilibrated in 50mM Tris-HCl, pH8.0.

1. For protein fragmentation, SG-Glutamic-C™ is typically added to the protein at a ratio of 1:100 to 1:20 enzyme to protein, by weight.
2. The incubation is allowed to proceed at 25-30°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 Glutamic-C digestion activity is as active as trypsin on a mass basis.

RELATED PRODUCTS

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



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

For other related products, visit our website at www.GBiosciences.com or contact us.

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