

# GlySERIAS™

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FOR RESEARCH  
USE ONLY  
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STORE AT  
-20°C



## SmartEnzymes™

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## INSTRUCTIONS FOR PRODUCT

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### **GlySERIAS, 2000 units** (A0-GS1-020)

Digestion of up to 2 mg fusion protein

## Quick Guide

### 1 Prepare GlySERIAS™

- Reconstitute GlySERIAS in 50  $\mu$ l ddH<sub>2</sub>O to a concentration of 40 units/ $\mu$ l.



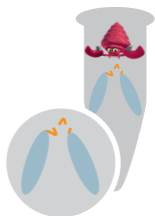
### 2 Add GlySERIAS™

- Add 1 unit GlySERIAS / 1  $\mu$ g fusion protein.



### 3 Digestion

- Incubate for 1 h at 37°C.



# PRODUCT DESCRIPTION

GlySERIAS is an enzyme that digests flexible linkers in engineered fusion proteins containing two or more proteins or peptides. It is active on  $(\text{Gly}_4\text{Ser})_n$ ,  $\text{Gly}_x\text{Ser}_y$  and polyglycine linkers. The repetitive design of the linker will lead to several simultaneous digestion sites and separation of the previously linked components. Optimal activity occurs at 37°C, pH 7.6 under native conditions.

GlySERIAS is cloned from phage K and is recombinantly expressed in *E. coli*. The enzyme contains a His-tag and has a molecular weight of 18 kDa.

## Unit Definition

One unit GlySERIAS digests  $\geq 95\%$  of 1  $\mu\text{g}$  dulaglutide at a minimum of one site, when incubated in TBS (50 mM Tris-HCl, 150 mM NaCl, pH 7.6) at 37°C for 15 minutes.

## Content and Storage

GlySERIAS is supplied lyophilized in 50 mM Tris-HCl, 150 mM NaCl, pH 7.6, with no preservatives added. Upon arrival, the enzyme should be stored at -20°C.

After reconstitution, the GlySERIAS enzyme is stable for at least 1 month at +4-8°C.

GlySERIAS is for R&D use only.

# DETAILED PROTOCOL

## Additional Materials Required

- Digestion buffer: TBS, pH 7.6.

## Sample Preparation

Prepare the fusion protein in the digestion buffer<sup>1</sup>. The final protein concentration in the digestion reaction should be 1-5 mg/ml.

### 1 Prepare GlySERIAS™

- Reconstitute GlySERIAS in 50 µl ddH<sub>2</sub>O to 40 units/µl.

### 2 Add GlySERIAS™

- Add 1 unit GlySERIAS / 1 µg fusion protein<sup>2</sup>.

### 3 Digestion

- Incubate for 1 h at 37°C<sup>3,4</sup>.

## Notes

- 1. Optimal activity is achieved in TBS buffer pH 7.6. The enzyme is active in pH 6.5-9 but the digestion efficiency may differ between different GS-linked proteins.*
- 2. A higher enzyme concentration may increase digestion efficiency of individual GS-linked proteins. This requires optimization.*
- 3. A shorter incubation time will allow for a more complete coverage of linker sequence whereas a longer incubation time will reduce complexity and result in more homogeneous subunits.*
- 4. The linker may not be completely removed from the GS-linked proteins.*

## Quality Control

GlySERIAS is tested to meet the specifications and lot-to-lot consistency.

GlySERIAS is tested for absence of microbial contamination with blood agar plates, Sabouraud dextrose agar plates and fluid thioglycollate medium.

## Related Products

### **FabRICATOR®**

Below hinge digestion of IgG

### **FabALACTICA®**

Above hinge digestion of human IgG1

### **FabDELLO™**

Above hinge digestion of human IgG1

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## **USA & Canada**

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Genovis Inc.  
245 First Street, Suite 1800  
Cambridge, MA 02142  
USA

Customer service: 1-617-444-8421  
Order phone (toll free): 1-855-782-0084  
Order fax: 1-858-524-3006  
Email: [orders.us@genovis.com](mailto:orders.us@genovis.com)

## **EMEA & Asia**

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Genovis AB  
Box 790  
SE-220 07 Lund  
Sweden

Customer service: +46 46 10 12 30  
Order phone: +46 46 10 12 30  
Order fax: +46 46 12 80 20  
Email: [order@genovis.com](mailto:order@genovis.com)