GlySERIAS™

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INSTRUCTIONS FOR PRODUCT

GlySERIAS, 2000 units (A0-GS1-020)
Digestion of up to 2 mg fusion protein

Last revised Jun 2022

Quick Guide

1 Prepare GlySERIAS™

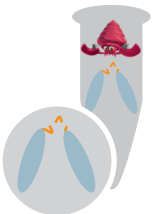
- Reconstitute GlySERIAS in 50 µl ddH_2O to a concentration of 40 units/µl.

2 Add GlySERIAS™

- Add 1 unit GlySERIAS / 1 µg 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 $(Gly_4Ser)_n$, Gly_xSer_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 ≥ 95% of 1 µg 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.

Additional Materials Required

- Digestion buffer: TBS, pH 7.6.

Sample Preparation

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

1 Prepare GlySERIAS™

- Reconstitute GlySERIAS in 50 µl ddH_2O to 40 units/µl.

2 Add GlySERIAS™

- Add 1 unit GlySERIAS / 1 µg fusion protein[2].

3 Digestion

- Incubate for 1 h at 37°C[3,4].

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.

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