GENOVIS

FabDELLO™

Lyophilized

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TEMPERATURES

FOR RESEARCH USE ONLY

Instructions for Use

FabDELLO Lyophilized 8 × 100 units (B1-BD1-008)
Process 8 × 100 µg hIgG1

FabDELLO Lyophilized 96 × 100 units (B1-BD1-096)
Process 96 × 100 µg hIgG1

DOWNLOAD INSTRUCTIONS FOR USE
www.genovis.com/ifu-B1-BD1

Lyophilized Enzyme for Above Hinge Digestion of Human IgG1

FabDELLO is a lysine-specific protease that digests human IgG1 at a single site above the hinge (…KSCDK / THTCPPCP…), yielding intact Fab and Fc fragments within two hours with no need for reducing conditions. The single digestion site is a result of the three-dimensional structure of human IgG1, making this lysine exposed for the enzyme. Additional digestion sites at exposed lysines on the Fc may appear if the N-glycans are removed. FabDELLO is active under native conditions and requires the presence of calcium ions. Optimal activity is obtained at 37°C and pH 7.0-8.5.

FabDELLO is cloned from *Bdellovibrio bacteriovorus* and expressed in *E. coli.* The enzyme contains a His-tag and the molecular weight is 32 kDa.

UNIT DEFINITION

One unit FabDELLO Lyophilized digests ≥ 90% of 1 µg human IgG1, when incubated in TBS (50 mM Tris-HCl, 150 mM NaCl), pH 7.6, containing 10 mM $CaCl_2$, at 37°C for 2 hours.

CONTENT AND STORAGE

FabDELLO Lyophilized contains two components.
The product box is shipped cold, and the components should be stored at different temperatures upon arrival.

- **FabDELLO Lyophilized** is supplied in 50 mM Tris-HCl, 150 mM NaCl, pH 7.6, with no preservatives added. FabDELLO Lyophilized should be stored at -20°C upon arrival. FabDELLO has autoproteolytic activity. Therefore the enzyme should be kept cold and used the same day as reconstitution.
- **1 vial 20× $CaCl_2$ solution (200 mM)** should be stored at +4-8°C upon arrival.

QUALITY CONTROL

FabDELLO Lyophilized is tested to meet the specifications and lot-to-lot consistency.

YOU MIGHT ALSO BE INTERESTED IN

FabALACTICA®
Above hinge digestion of human IgG1

GingisKHAN®
Above hinge digestion of human IgG1

FabULOUS™
Above hinge digestion of IgG

FabRICATOR®
Below hinge digestion of IgG

Above Hinge Digestion of Human IgG1

PREPARATIONS

Additional Materials Required

- Digestion buffer: TBS (50 mM Tris-HCl, 150 mM NaCl), pH 7.6.

Sample Preparation

Prepare the human IgG1 in the digestion buffer.
The final IgG concentration in the digestion reaction should be 0.5-5 mg/ml.

WORKFLOW

1. Add IgG

1.1 Pierce the aluminum foil with a pipet tip.

1.2 Add 100 µg hIgG1 to the enzyme plate vial.[1]

2. Add Buffer

2.1 Add digestion buffer to a total volume of 95 µl.[2,3]

3. Add $CaCl_2$

3.1 Add 5 µl 20× $CaCl_2$ solution (200 mM).[4]

4. Digestion

4.1 Mix the solution by aspirating and dispensing the liquid a few times.

4.2 Cover the plate vial with adhesive plastic or move the content to another vial.

4.3 Incubate for 2 h at 37°C.[5]

1. The enzyme may also be dissolved in ultrapure water and added to a digestion in another vial if digestion of smaller amounts of hIgG1 is desired.
2. Optimal activity is achieved in TBS buffer pH 7.0-8.5. Buffers containing phosphate should be avoided since the phosphate ions will form an insoluble calcium phosphate salt with the calcium ions required for enzymatic activity.
3. Another buffer volume may be added. The total volume in the enzyme vial should be 20-200 µl.
4. The final $CaCl_2$ concentration should be 10 mM. If the reaction volume is adjusted, the volume of the $CaCl_2$ solution must also be adjusted.
5. The digestion time may need to be optimized for individual antibodies.

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