

FabRICATOR[®]Z

FOR RESEARCH
USE ONLY
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STORE AT
-20°C



SmartEnzymes[™]



GENOVIS

INSTRUCTIONS FOR PRODUCT

FabRICATOR[®]Z 2000 units (A0-FRZ-020)

Digestion of up to 2 mg mouse IgG2a or mouse IgG3

1 Prepare FabRICATOR[®] Z

Reconstitute FabRICATOR Z in 50 μ l ddH₂O to a concentration of 40 units/ μ l.



2 Add FabRICATOR[®] Z

Add 1 unit FabRICATOR Z / 1 μ g IgG¹.



3 Digestion

Incubate for 2 h² at 37°C.



PRODUCT DESCRIPTION

FabRICATOR Z is an enzyme for preparation of F(ab')₂ from mouse subclasses IgG2a and IgG3. FabRICATOR Z digests mouse IgG2a and IgG3 at one specific site below the hinge region, resulting in precise F(ab')₂ and Fc fragments (Table 1). Most mouse IgG2a and IgG3 are digested by FabRICATOR Z within 2 hours, although the enzyme:Ab ratio and/or digestion time may need to be optimized for certain antibodies. For digestion of human IgGs, FabRICATOR® is recommended.

FabRICATOR Z digests IgG at one specific site and there is no risk of overdigestion if the incubation time is prolonged. FabRICATOR Z digests IgG at mild conditions, thus preserving the immunoreactivity. FabRICATOR Z digests IgG in sodium phosphate buffer with pH ranging from 6.0-8.0, but is most active at pH 6.5 and at low NaCl concentrations.

FabRICATOR Z is derived from *S. equi ssp. zooepidemicus* and expressed in *E. coli*. The enzyme contains a His-tag and the molecular weight is 36 442 Da.

Immobilized FabRICATOR Z is available in convenient spin column format, FragIT™ Z, for generation of fragments without FabRICATOR Z in the final sample preparation.

Table 1. *FabRICATOR Z digestion sites.*

Mouse IgG subclass	FabRICATOR Z digestion site
IgG2a	..CPAPNLLG / GPSVF..
IgG3	..CPPGNILG / GPSVF..

Unit Definition

One unit FabRICATOR Z digests $\geq 95\%$ of 1 μg mouse IgG2a when incubated in 10 mM sodium phosphate, 10 mM NaCl, pH 6.5 at 37°C for 2 h.

Content and Storage

FabRICATOR Z is supplied lyophilized in 50 mM Tris, 150 mM NaCl, pH 7.6, with no preservatives added.

FabRICATOR Z is shipped at ambient temperature and should be stored at -20°C upon arrival.

After reconstitution, FabRICATOR Z is stable for 1 month at +4-8°C.

FabRICATOR Z is for R&D use only.

Additional Materials Required

Digestion buffer³: 10 mM sodium phosphate, 10 mM NaCl, pH 6.5.

Preparation of IgG

Prepare the IgG in digestion buffer³.
The final IgG concentration in the reaction should be 0.5-10 mg/ml.

Antibody Subunit Generation

1 Prepare FabRICATOR[®]Z

Reconstitute FabRICATOR Z in 50 μ l ddH₂O to a concentration of 40 units/ μ l.

2 Add FabRICATOR[®]Z

Add 1 unit FabRICATOR Z / 1 μ g IgG¹. The final IgG concentration should be 0.5-10 mg/ml.

3 Digestion

Incubate for 2 h² at 37°C.

Notes

1. *The enzyme:antibody ratio may need to be increased for individual antibodies.*
 2. *The incubation time may need to be prolonged for individual antibodies.*
 3. *pH and NaCl concentration can be increased but this may require increased enzyme concentration and/or prolonged incubation time.*
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Quality Control

FabRICATOR Z is tested to meet the specifications and lot-to-lot consistency.

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

Related Products

FragIT[™] Z

Immobilized FabRICATOR Z, digestion of mIgG2a and mIgG3

FragIT[™] Z kit

Digestion of mIgG2a or mIgG3 and purification of F(ab')₂ and Fc fragments

FabRICATOR® Z

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For research use only. Not intended for any animal or human therapeutic or diagnostic use.

All goods and services are sold subject to Genovis' General Terms and Conditions of Sale.

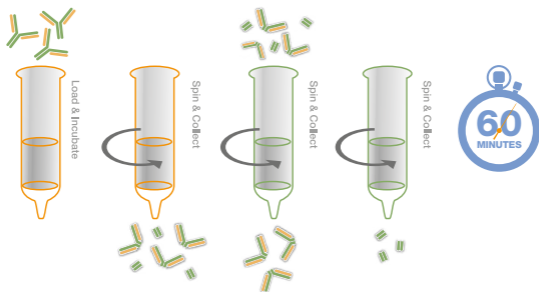
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FragIT™ kit

Digestion of IgG and Purification of F(ab')₂ and Fc Fragments

FragIT kit consists of an IgG digestion column, FragIT, and an affinity purification column, CaptureSelect™*. FragIT is a resin with FabRICATOR® enzyme covalently coupled to agarose beads for subunit fragmentation of IgG to generate F(ab')₂ and Fc fragments. After digestion, the fragments can be purified using the CaptureSelect column supplied in the kit.

- Digestion of IgG on a column.
- Purification of F(ab')₂ and Fc fragments.



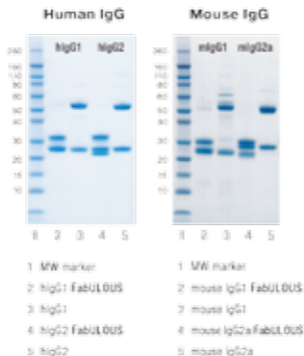
**Made with Thermo Scientific™ CaptureSelect™ resin from Thermo Fisher Scientific Inc. and its subsidiaries. Thermo Scientific and CaptureSelect are trademarks of Thermo Fisher Scientific Inc. and its subsidiaries.*

FabULOUDS®

Digestion of IgG from Many Different Species and Subclasses

FabULOUDS is a cysteine protease that digests IgG in the upper hinge region, generating intact Fab and Fc fragments.

- Active on several IgG species, including human, mouse, rat and goat.
- Rapid – a 60 minute protocol.
- FabULOUDS Fab kit is available for rapid and easy purification of Fab fragments from mouse IgG.





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