



GST Buffer Kit

Product Booklet

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1 Introduction

Product codes

28952361

About

Sufficient reagents are supplied to purify up to 20 mg of GST-tagged protein.

Important

Read these instructions carefully before using the products.

Intended use

The products are intended for research use only, and shall not be used in any clinical or *in vitro* procedures for diagnostic purposes.

Safety

All chemicals should be considered as potentially hazardous. For use and handling of the products in a safe way, refer to the Safety Data Sheets.

Storage

Store at 4°C to 8°C. Do not freeze.

2 Description

GST Buffer Kit contains stock solutions of binding and elution buffers (dilution buffer) for purification of Glutathione-S-Transferase (GST)-tagged proteins. The kit eliminates time-consuming buffer preparation and thus promotes fast, reproducible and convenient purification work.

GST Buffer Kit can be used in combination with a number of column types, such as GST SpinTrap™, GST MultiTrap™ FF, GST MultiTrap 4B, GST GraviTrap™, GSTrap™ FF, GSTrap 4B and GSTrap HP.

3 Components

Sufficient reagents are supplied to purify up to 20 mg of GST-tagged protein, and it can be used with a variety of formats.

- 50 mL 10 × PBS stock solution pH 7.3 (1.4 M NaCl, 27 mM KCl, 101 mM Na₂HPO₄, 18 mM KH₂PO₄, pH 7.4).
- Reduced Glutathione 0.154 g. Addition of 50 mL of glutathione dilution buffer results in a solution of 10 mM glutathione, 50 mM Tris-HCl (pH 8.0).
- 50 mL dilution buffer: 50 mM Tris-HCl (pH 8.0).

4 Principle

Reduced glutathione is commonly used to elute GST-tagged proteins from Glutathione Sepharose™ media.

The GST-tag system has high selectivity and gives high purity of GST-tagged proteins. No reduced glutathione is normally required in the binding buffer and should be avoided due to risk for non-binding of GST-tagged protein to the media.

5 Buffer preparation

The Table below specifies volumes of supplied binding and elution buffer as well as the volume of distilled water required to prepare the buffers.

Table 1. Preparation of binding and elution buffer for different columns

Column	Buffer	Phosphate buffer stock solution (mL)	Dilution buffer Tris-HCl (mL)	Glutathione (10 mM) (mg)	Dist. water (mL)	Final volume (mL)
GSTSpinTrap(10×)	Binding	2.5	-	-	22.5	25
	Elution	-	5	15.4	-	5
GSTGraviTrap	Binding	6	-	-	54	60
	Elution	-	10	30.8	-	10
GSTrap 1-mL	Binding	4.5	-	-	40.5	45
	Elution	-	10	30.8	-	10
GSTrap5-mL	Binding	22.5	-	-	202.5	225
	Elution	-	50	154	-	50
GSTMultiTrap(one 96 well plate)	Binding	43.2	-	-	388.8	432
	Elution	-	50	154	-	50

GST Buffer Kit can also be used for batch/gravity flow purification using Glutathione Sepharose media packed in e.g. empty disposable columns.

6 Purification protocol

The purification protocols for the protein purification procedures can be found in the instructions for the selected column/media at [cytiva.com/sampleprep](https://www.cytiva.com/sampleprep).

7 Ordering information

Product	Quantity	Product code
GST Buffer Kit	1	28952361
GST SpinTrap	50 columns	28952359
GST GraviTrap	10 columns	28952360
GST Bulk Kit	1 kit	27457001
GST MultiTrap 4B	4 × 96-well plates	28405500
GST MultiTrap 4 FF	4 × 96-well plates	28405501

Accessories	Quantity	Product code
LabMate PD-10 Buffer Reservoir	10	18321603
PD-10 Desalting columns	30	17085101
PD-10 Columns, empty	50	17043501

Related products	Quantity	Product code
GSTrap 4B	5 × 1 mL	28401745
GSTrap 4B	100 × 1 mL ¹	28401746
GSTrap 4B	1 × 5 mL	28401747
GSTrap 4B	5 × 5 mL	28401748
GSTrap 4B	100 × 5 mL ¹	28401749
GSTrap FF	5 × 1 mL ²	17513001
GSTrap FF	1 × 5 mL ²	17513101
GSTrap FF	5 × 5 mL ²	17513102
GSTprep FF 16/10	1	28936550
GSTrap HP	5 × 1 mL ²	17528101
GSTrap HP	1 × 5 mL ²	17528201
GSTrap HP	5 × 5 mL ²	17528202

¹ Pack size available by specific customer order.

² Larger quantities are available. Please contact Cytiva for more information.

Bulk of Glutathione Sepharose media is also available in different quantities.

GST detection product	Quantity	Product code
GST Detection Module	50 detections	27459001
GST Detection Module (96-well format)	5 × 96-well plates	27459201
Anti-GST Antibody	0.5 mL, 50 detections	27457701
ECL™ GST Western Blotting Detection Kit	1	RPN123

GST cloning product	Quantity	Product code
pGEX 5' Sequencing Primer 5'-d [GGGCTGGCAAGCCAC GTTTGGTG]-3' pGEX 3'	0.05 A ₂₆₀ units	27141001
Sequencing Primer 5'-d [CCGGGAGCTGCATGT GTCAGAGG]-3'	0.05 A ₂₆₀ units	27141101
<i>E. coli</i> BL21	1 vial	27154201
13 different pGEX vectors	5 µg or 25 µg	See cytiva.com

Site-specific Proteases	Quantity	Product code
PreScission™ Protease	500 units	27084301
Thrombin	500 units	27084601
Factor Xa	400 units	27084901

Lysis kit	Quantity	Product code
Yeast Protein Extraction Buffer Kit	1	28944045
Mammalian Protein Extraction Buffer	1	28941279

Literature	Product code
GST Gene Fusion System Handbook	18115758
Recombinant Protein Purification Handbook, Principles and methods	18114275
Affinity Chromatography Handbook, Principles and methods	18102229

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