

GE Healthcare

GST Buffer Kit

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

Product booklet

Code: 28-9523-61



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<http://www.gelifesciences.com/sampleprep>

GE Healthcare UK Limited.

Amersham Place, Little Chalfont,
Buckinghamshire, HP7 9NA UK

2. Handling

2.1. Safety warnings and precautions

Warning: For research use only.

Not recommended or intended for diagnosis of disease in humans or animals. Do not use internally or externally in humans or animals.

All chemicals should be considered as potentially hazardous. Only persons trained in laboratory techniques and familiar with the principles of good laboratory practice should handle this product. Suitable protective clothing such as laboratory overalls, safety glasses, and gloves should be worn. Care should be taken to avoid contact with skin or eyes; if contact should occur, wash immediately with water. See material safety data sheet(s) and/or safety statement(s) for specific advice.

2.2. Storage

Store at 4°C to 8°C. Do not freeze.

3. Introduction

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.

4. 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).

5. 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.

6. Buffer preparation

Table 1 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 columns¹.

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

¹ GST Buffer Kit can also be used for batch/gravity flow purification using Glutathione Sepharose media packed in e.g. empty disposable columns.

7. Purification protocol

The purification protocols for the protein purification procedures can be found in the instructions for the selected column/media at www.gelifesciences.com/sampleprep.

8. Ordering information

Product	Quantity	Code No
GST Buffer Kit	1	28-9523-61
GST SpinTrap	50 columns	28-9523-59
GST GraviTrap	10 columns	28-9523-60
GST Bulk Kit	1 kit	27-4570-01
GST MultiTrap 4B	4 × 96-well plates	28-4055-00
GST MultiTrap 4 FF	4 × 96-well plates	28-4055-01
Accessories	Quantity	Code No
LabMate™ PD-10 Buffer Reservoir	10	18-3216-03
PD-10 Desalting columns	30	17-0851-01
	50	17-0435-01
Related products	Quantity	Code No
GSTrap 4B	5 × 1 ml	28-4017-45
GSTrap 4B	100 × 1 ml ¹	28-4017-46
GSTrap 4B	1 × 5 ml	28-4017-47
GSTrap 4B	5 × 5 ml	28-4017-48
GSTrap 4B	100 × 5 ml ¹	28-4017-49
GSTrap FF	5 × 1 ml ²	17-5130-01
GSTrap FF	1 × 5 ml ²	17-5131-01
GSTrap FF	5 × 5 ml ²	17-5131-02
GSTprep FF 16/10	1	28-9365-50
GSTrap HP	5 × 1 ml ²	17-5281-01
GSTrap HP	1 × 5 ml ²	17-5282-01
GSTrap HP	5 × 5 ml ²	17-5282-02

¹ Pack size available by specific customer order.

² Larger quantities are available. Please contact GE Healthcare for more information.

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

GST detection product	Quantity	Code No
GST Detection Module	50 detections	27-4590-01
GST Detection Module (96-well format)	5 × 96-well plates	27-4592-01
Anti-GST Antibody	0.5 ml, 50 detections	27-4577-01
ECL™ GST Western Blotting Detection Kit	1	RPN123
GST cloning product	Quantity	Code No
pGEX 5' Sequencing Primer 5'-d [GGG-CTG- GCAAGCCACGTTTGGTG]-3'	0.05 A ₂₆₀ units	27-1410-01
pGEX 3' Sequencing Primer 5'-d [CCG-GGAGCTGCATGTG- CAGAGG]-3'	0.05 A ₂₆₀ units	27-1411-01
<i>E. coli</i> BL21	1 vial	27-1542-01
13 different pGEX vectors	5 µg or 25 µg	*
* See www.gelifsciences.com		
Site-specific Proteases	Quantity	Code No
PreScission™ Protease	500 units	27-0843-01
Thrombin	500 units	27-0846-01
Factor Xa	400 units	27-0849-01
Lysis kit	Quantity	Code No
Yest Protein Extraction Buffer Kit	1	28-9440-45
Mammalian Protein Extraction Buffer	1	28-9412-79
Literature	Code No	
GST Gene Fusion System Handbook	18-1157-58	
Recombinant Protein Purification Handbook, Principles and methods	18-1142-75	
Affinity Chromatography Handbook, Principles and methods	18-1022-29	

GE Healthcare offices:

GE Healthcare Bio-Sciences AB
Björkgatan 30, 751 84 Uppsala,
Sweden

GE Healthcare Europe GmbH
Munzinger Strasse 5, D-79111 Freiburg,
Germany

GE Healthcare Bio-Sciences Corp.
800 Centennial Avenue, P.O. Box 1327,
Piscataway, NJ 08855-1327,
USA

GE Healthcare Japan Corporation
Sanken Bldg. 3-25-1, Hyakunincho,
Shinjuku-ku, Tokyo 169-0073,
Japan

For contact information for your local office,
please visit: www.gelifesciences.com/contact

GE Healthcare UK Limited
Amersham Place
Little Chalfont, Buckinghamshire,
HP7 9NA, UK

<http://www.gelifesciences.com/sampleprep>



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