

Biochemicals
Electrophoresis
Bioseparation
Life Sciences
Specials

SERVA *BluePrep* Kits

for Simple, Fast and Efficient
Sample Preparation

Sample preparation is a crucial step for optimal results in proteomics and genomics

SERVA *BluePrep* kits base on an innovative technology for protein isolation and purification. Many downstream applications, e.g. SDS-PAGE, IEF, 2D-PAGE, mass spectrometry etc. require sample desalting, detergent removal, protein enrichment or diminishing of interfering serum proteins.

SERVA *BluePrep* 2in1, 3in1 and 4in1 kits provide a rapid method for the sequentially isolation and purification of RNA, DNA and proteins from a single sample using one column without sample splitting. The kits will not only save time, but will also be of a great benefit when isolating nucleic acids and proteins from precious, difficult to obtain or very small samples. Furthermore, gene expression analysis will be more reliable since the RNA, DNA and proteins are derived from the same sample, therefore eliminating inconsistent results.

Fast and Easy Handling with a Broad Application Range

The purification technology of the SERVA *BluePrep* kits bases on spin column chromatography using ion exchange matrix. This separation principle allows purification without limitation in molecular weight, suitable for peptides as well as high molecular weight proteins. The supplied buffers are ready-to-use. Depending on the kit, 10 samples can be purified simultaneously within 20 – 30 min. The SERVA *BluePrep* Macro kits were developed for purification of large sample volumes or protein amounts and allow the process of 4 samples in parallel within 20 – 45 min.



High yield combined with high purity

The fast and easy handling of the SERVA *BluePrep* kits does not lead to a compromise in sample yield and purity. For example, the SERVA *BluePrep* CBD Micro Kit eliminates up to 99% of salt content. The protein recovery is up to 99%. The SERVA *BluePrep* DetergentEx Micro Kit removes more than 95% detergent with a protein recovery of 80 – 95%.

- Fast and easy handling
- Broad application range
- Time and sample saving RNA, DNA and protein isolation without sample splitting
- No limitation of protein sizes because of ion exchange technology
- High yield
- High purity

Specifications and order information: SERVA BluePrep Kits

Product	Description	Column Binding Capacity
SERVA BluePrep CBD Micro Kit	Sample concentrating, buffer exchange and desalting	50 µg protein
SERVA BluePrep CBD Macro Kit	Sample concentrating, buffer exchange and desalting	8 mg protein
SERVA BluePrep DetergentEx Micro Kit	Efficient removal of detergents	50 µg protein
SERVA BluePrep DetergentEx Macro Kit	Efficient removal of detergents	8 mg protein
SERVA BluePrep Major Serum Protein Removal Kit	Depletion of serum proteins without specific antibodies	500 µg protein
SERVA BluePrep Urine Concentration Micro Kit	Purification, concentrating and desalting of urine proteins	1 ml urine 96-well: 600 µl urine
SERVA BluePrep Urine Concentration Macro Kit	Purification, concentrating and desalting of urine proteins	20 ml urine
SERVA BluePrep Protein EndotoxinEx Micro Kit	Rapid removal of endotoxins	150 µg protein
SERVA BluePrep Protein EndotoxinEx Macro Kit	Rapid removal of endotoxins	4 mg protein
SERVA BluePrep IB Isolation Micro Kit	Isolation of recombinant proteins in the form of inclusion bodies	1.5 ml bacterial culture
SERVA BluePrep IB Isolation Macro Kit	Isolation of recombinant proteins in the form of inclusion bodies	100 ml bacterial culture
SERVA BluePrep ON-Column Digest Kit	Simultaneous protein tryptic digestion and volumetric concentration	15 µg protein
SERVA BluePrep 2in1 Purification Kit	Isolation and purification of total RNA and protein	50 µg RNA 200 µg protein
SERVA BluePrep 3in1 Purification Kit	Isolation and purification of total RNA, genomic DNA and protein	50 µg RNA 200 µg DNA 200 µg protein
SERVA BluePrep 4in1 Purification Kit	Isolation and purification of total RNA, genomic DNA, protein and microRNA	50 µg RNA 200 µg DNA 200 µg protein

SERVA BluePrep 2in1, 3in1 and 4in1 kits

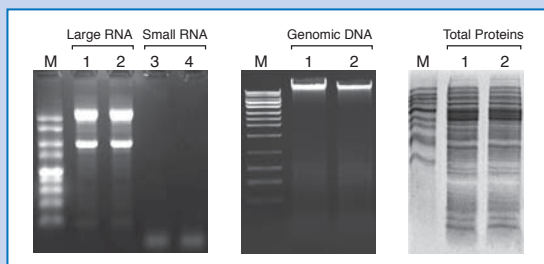


Figure 1:
Sequentially isolation of total RNA (A, lane 1+2), microRNA (A, lane 3+4), genomic DNA (B, lane 1+2) and total proteins (C, lane 1+2) from HeLa cells.

SERVA BluePrep Major Serum Protein Removal Kit

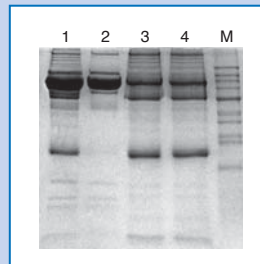
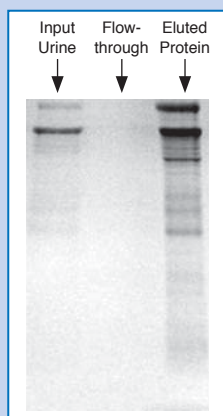


Figure 2:
Depletion of abundant serum proteins.
Lane 1: Human serum proteins
Lane 2: Flowthrough of not bound proteins
Lanes 3 and 4: Eluted proteins without interfering bands of abundant serum proteins.

Protein Recovery/Yield	Purity	Process Time	Cat. No.	Size
Up to 99%	Up to 99%	10 samples in 20 min	42070.01	25 reactions
			42071.01	50 reactions
Up to 99%	Up to 99%	4 samples in 20 min	42072.01	4 reactions
80 – 95%	> 95%	12 samples in 40 min	42073.01	25 reactions
			42074.01	50 reactions
Up to 100%	> 95%	4 samples in 40 min	42075.01	4 reactions
n.a.	n.a.	10 samples in 30 min	42079.01	25 reactions
max. 200 µg max. 120 µg	Up to 99%	12 samples in 20 min 96-well in 60 min	42080.01	25 reactions
max. 4 mg	Up to 99%	4 samples in 45 min	42081.01	4 reactions
> 95%	≤ 0.01 EU/protein	10 samples in 20 min	42085.01	20 reactions
> 95%	≤ 0.1 EU/protein	10 samples in 30 min	42086.01	4 reactions
Up to 50 µg	> 95%	12 samples in 60 min	42076.01	20 reactions
			42077.01	50 reactions
Up to 12 mg	> 95%	1 sample in 60 min	42078.01	4 reactions
Up to 99%	n.a.	10 samples in 20 min plus 1 h incubation	42082.01	25 reactions
10 ⁶ HeLa cells: 15 µg RNA 150 µg protein	Up to 99%	10 samples in 25 min	42088.01	20 reactions
10 ⁶ HeLa cells: 15 µg RNA 8 µg DNA 150 µg protein	Up to 99%	10 samples in 30 min	42087.01	20 reactions
10 ⁶ HeLa cells: 15 µg RNA 8 µg DNA 150 µg protein	Up to 99%	10 samples in 40 min incl. separate miRNA purification	42089.01	20 reactions



**SERVA BluePrep
Urine Concentration Kit**

Figure 3:
Protein concentration from urine sample.

Lane 1:
Urine Input: Binding of urine proteins

Lane 2:
Protein-free flowthrough

Lane 3:
Eluted proteins: Concentrated urine proteins

SERVA BluePrep Protein EndotoxinEx Kit

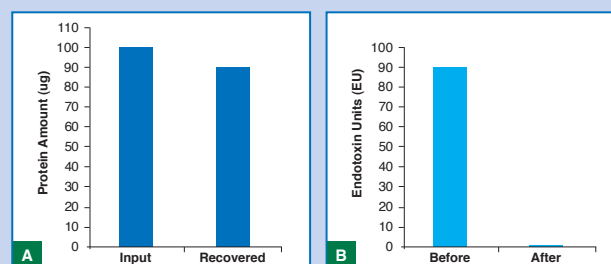


Figure 4:
Endotoxin removal

A. Protein amount before (input) and after (recovered) endotoxin removal
B. Endotoxin activity before and after endotoxin removal

SERVA *BluePrep* CBD Kit (Micro/Macro)

Sample concentrating, buffer exchange and desalting in one step.

SERVA *BluePrep* DetergentEx Kit (Micro/Macro)

Efficient removal of detergents, e.g. Triton® X-100, SDS, CHAPS, Nonidet P-40, Tween® 20 and sample concentrating in parallel.

SERVA *BluePrep* Major Serum Protein Removal Kit

Depletion of serum proteins without specific antibodies allows the use of a wide variety of samples, including human and various animals.

SERVA *BluePrep* Urine Concentration Kit (Micro/Macro)

Purification, concentrating and desalting of urine proteins for identification of potential biomarkers in urine, for diagnosis and/or monitoring renal and other diseases.

SERVA *BluePrep* ON-Column Digest Kit

Simultaneous protein tryptic digestion and volumetric concentration of the purified peptides for downstream analysis such as SDS-PAGE and 2D gel electrophoresis, MALDI-TOF, LC/MS and LC/MS/MS.

SERVA *BluePrep* Protein EndotoxinEx Kit (Micro/Macro)

Rapid removal of endotoxins from up to 4 mg of previously purified proteins or peptides for downstream applications in cell culture or antibody production.

SERVA *BluePrep* IB Isolation Kit (Micro/Macro)

Isolation of recombinant proteins in the form of inclusion bodies from *E. coli* by lysis of bacterial cells to release inclusion bodies in solid form, solubilization of purified inclusion bodies and purification of the recombinant protein.

SERVA *BluePrep* 2in1, 3in1 and 4in1 Purification Kit

Sequentially isolation and purification of total RNA including microRNA, genomic DNA and proteins from a single sample of cultured cells, tissue samples, blood, bacteria, yeast, fungi or plants. SERVA *BluePrep* 4in1 Purification Kit allows separate isolation of small RNA (microRNA).

SERVA *BluePrep* 2in1:

Isolation and purification of total RNA and protein

SERVA *BluePrep* 3in1:

Isolation and purification of total RNA, genomic DNA and protein

SERVA *BluePrep* 4in1:

Isolation and purification of total RNA, genomic DNA, protein and microRNA

