



## ProFoldin

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# INSTRUCTIONS

## ProFoldin

### Protein and DNA Removal Columns

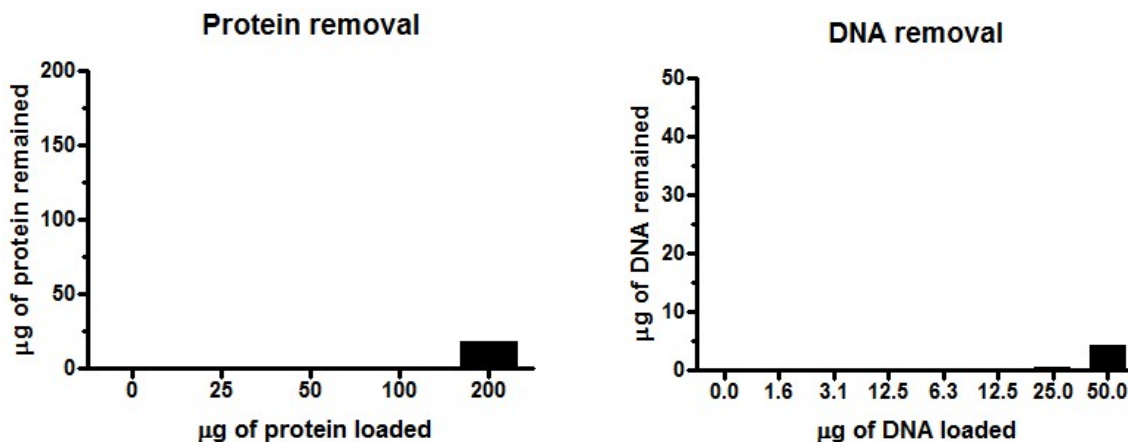
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**Protein and DNA Removal Spin-columns**

**Catalog number: PNR020**

#### INTRODUCTION

The Protein and DNA Removal Columns are designed to separate small molecules and liposomes from proteins, DNA and RNAs. The columns can be used for preparation of samples by removing the DNA, RNA or proteins from biological samples for HPLC or other applications. They can be also used for separation of free drugs and liposome-encapsulated drugs from protein-bound or DNA-bound drugs and separation of free ligands from receptor-bound ligands. Binding between the biological molecules and the column resin is mainly charge-charge interactions. The proteins, nucleic acids and protein-bound drug stay on the column while the small polar molecules or liposomes are in the elute. Organic and inorganic phosphate molecules may also bind to the column. The binding capacity of the spin columns is more than 100  $\mu\text{g}$  of protein or 20  $\mu\text{g}$  of DNA per column.



The **Protein and DNA Removal Spin-columns (Catalog number: PNR020)** includes 20 pre-packed spin-columns in 50 % ethanol..

#### PROTOCOLS

1. Spin the pre-packed columns briefly using a bench-top microcentrifuge to set down the resin. Cut off the caps of 1.5 ml-ependorf tubes and use the tubes as receivers of the spin columns. Remove the column bottom tips and caps. Place the columns into the 1.5 ml-ependorf tubes and spin the columns at 13,000 rpm for 1 min. Discard the solution. Load 200  $\mu\text{l}$  of water and spin the columns at 13,000 rpm for 1 min. Discard the solution. Transfer each column into a clean labeled 1.5-ml eppendorf tube.
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2. Load 200  $\mu$ l of the sample in a buffer containing 100 mM NaCl onto each column and spin the columns at 1000 rpm for 1 min. Then continue to spin the columns at 13,000 rpm for 1 min and save the elute.

Note: Step 2 can be repeated if the sample volume is more than 200  $\mu$ l until the column binding capacity is reached. Inclusion of 100 mM NaCl is not necessary for removal of protein or DNA but helps to minimize binding of small charged molecules on the column.

3. Centrifuged the elute at 13,000 rpm for 1 min to remove any insoluble material. Alternatively, the elute can be filtrated with a 0.22  $\mu$ m to remove any insoluble material.

## RELATED PRODUCTS

NAR911	Nucleic Acid Removal Kit
MDC050	Micro Desalting Spin Column Set
MPR020	Micro Phosphate Removal Column Set
DAK1000	Detergent Assay Kit
CMC1000	Detergent Critical Micelle Concentration (CMC) Assay Kit
LIP1000	MicroGram Lipid Assay Kit
NPA1000	NanoMolar Phosphate Assay Kit
PPD1000	MicroMolar Polyphosphate Assay Kit
HIS200	MicroMolar Histidine Assay Kit
CYS200	MicroMolar Cysteine Assay kit
PEP200	Peptide Assay Kit
PAA100K	MicroMolar Primary Amine Assay Kit
CAK1000	Coenzyme A Assay Kit
EDTA200	MicroMolar EDTA Assay kit
DTT200	MicroMolar DTT Assay kit
MAD100K	MicroMolar ADP Assay kit
MUD100K	MicroMolar UDP assay kit
MCA1000	MicroMolar Copper Assay Kit
NZA1000	NanoMolar Zinc Assay Kit
NMA1000	NanoMolar Nickel / Cobalt Assay Kit
CLA100	MicroMolar Chloride Assay Kit
MSA200	MicroMolar Sulfate Assay Kit
PST100	Penicillin Drug Stability Test Kit
PMX200	MicroGram Polymyxin Assay Kit
CPT200K	MicroMolar Cisplatin Assay Kit
OPT200	MicroMolar Oxaliplatin Assay Kit
CFZ200	MicroGram Carfilzomib Assay Kit

For information of molecular separation tools and assay kits, please visit <http://www.profoldin.com>.