

ATPBind™ resin

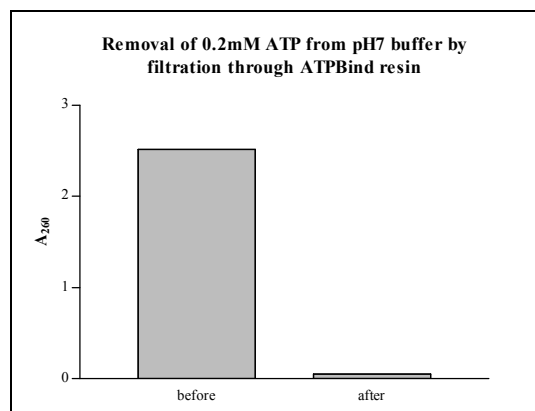
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1. INTRODUCTION

Adenosine triphosphate (ATP) is a product of numerous enzymatic reactions. It is an important marker in diagnostic tests (e.g. the creatine kinase test for acute myocardial infarction) and in studies of programmed cell death and necrosis. Bioluminescence assays are commonly used to measure ATP but the high sensitivity of these assays means that traces of ATP found in water or other assay components can lead to unacceptably high backgrounds. ATPBind™ columns provide a quick and easy way to remove contaminating ATP from solutions. Figure 1 illustrates how efficiently an ATPBind™ column decontaminates a buffered solution spiked with a very high level of ATP.

Figure 1. Decontamination of solutions



2. INSTRUCTIONS

2.1. Preparation of ATPBind™ resin

The resin is supplied pre-packed in 0.4g mini-columns. Before use, check that the screw top on the column is finger tight and that the cap on the bottom of the column has been removed. The column should be attached to a syringe and washed with 20-30ml of distilled water or a phosphate-free buffer to remove any fine particulate matter. Apply only moderate pressure otherwise the column may become detached.

2.2. Using ATPBind™ columns

The solution from which the ATP is to be removed should be applied to the column with gentle pressure to give a flow rate of around 2-3 drops per second. Do not apply too much force otherwise the contact time of the solution with the resin will be too brief for efficient removal in a single pass.

2.3 Column capacity

The capacity of ATPBind™ resin is >15µmol/g, so each mini-column will remove at least 6µmol of ATP.

2.4. Compatibility

ATPBind™ resin has been evaluated using a variety of conditions. The table below provides a summary of the testing that has been carried out in our laboratories.

Conditions	Interference
100 mM MES, pH 6.0	None
100 mM MOPS pH 7.0	None
100 mM Hepes, pH 7.5	None
100 mM Tris pH 8.0	None
1 M NaCl	None
50 mM Tris/150 mM NaCl/ 10 mM MgCl ₂ , pH 8.0	None

Phosphate buffers or high concentrations of negatively charged molecules (e.g. EDTA) may reduce the capacity of ATPBind™ resin.

2.5. Storage of reagent

Upon receipt ATPBind™ should be stored at 4°C. Under these conditions excellent performance will be observed for a minimum of 6 months.

3. Ordering information

Product #503-0002 5 x 0.4g columns

For larger quantities please contact our customer service department.