





PurKine™ Biotin-Tag Streptavidin Resin 6FF

Cat #: BMR2030

Size: 2 mL/10 mL

	Biotin-Tag Streptavidin Resin 6FF, crosslinked 6% agarose		
	Cat #: BMR2030		Lot #: Refer to product label
	Capacity: >6 mg Biotin-tagged protein/mL		Bead size: 45-165 µm
	Tolerance: 0.3 MPa, 3 bar		Buffer: PBS containing 20% ethanol
	Storage: Stored at 4°C for 12 months		

Assay Principle

PurKine™ Biotin-Tag Streptavidin Resin 6FF is a purified Resin of biotin or biotinylated protein, antibody and other substances. The principle of its action is based on the interaction between Streptavidin and biotin. Streptavidin is highly cross-linked on 6% Agarose, and the unique preparation process makes it have higher physical and chemical properties. It can tolerate higher pressure and achieve purification of the target protein at a relatively high flow rate.

Reagent Preparation

Water and chemicals used for buffer preparation should be of high purity. It is recommended to filter all buffers by passing through a 0.22 µm or 0.45 µm filter before use. For most proteins, the following buffer are recommended:

Binding of biotin or biotinylated substances:

Binding/Wash Buffer: 20 mM NaH₂PO₄, 0.15 M NaCl, pH 7.4

Elution Buffer: 8 M Guanidine-HCl, pH 1.5

Purification of iminobiotinylated substances:

Binding/Wash Buffer: 50 mM (NH₄)₂CO₃, 0.5 M NaCl, pH 10.0

Elution Buffer: 50 mM NH₄Ac, 0.5 M NaCl, pH 4.0

Sample Preparation

The sample should be centrifuged and/or filtered through a 0.22 µm or 0.45 µm filter before it is applied to the medium to prevent clogging the column. If the sample is too viscous, dilute it with binding buffer to prevent clogging the column. Avoid using protease inhibitors or other additives that contain chelators, such as EDTA, or strong reducing agents, such as DTT or β-mercaptoethanol, which will disrupt the function of the resin. Be careful not to exceed the resin's binding capacity.

Procedure for Sample Purification

1. Pack column with an appropriate amount of Biotin-Tag Streptavidin Resin 6FF. Allow storage buffer to drain from resin by gravity flow.
2. Add 2 resin-bed volume Binding buffer to the column. Equilibrate the column, and drain away the Binding buffer. Repeat this step for three times.

3. Add the prepared sample (prepare sample by mixing protein extract with equal binding buffer) to the column, collect the effluent liquid which can be analyzed by SDS-PAGE.

Note: For maximal binding, the sample can be incubated for 30 min at room temperature or 4°C. Be careful not to exceed the resin's binding capacity.

4. Add 2 resin-bed volume wash buffer to the column to remove the non-specific adsorption protein. Collect the wash liquid which can be analyzed by SDS-PAGE. Repeat this step for six times.

5. Add 5-10 resin-bed volume elution buffer to the column to wash the target protein, or until the absorbance of the effluent at 280 nm is stable. Collect the wash liquid, and analyzed the content in each tube respectively.

6. Examine and identify the fractions containing the target protein. Use UV absorbance, SDS-PAGE, or Western blotting.

Cleaning-in-Place (CIP)

In general, resin may be used at least five times. When a column used to purify protein from cell extract usually has buildup of insoluble substances and cell debris, which are non-specifically absorbed onto the matrix support and cannot be completely removed during washing steps. If the column is to be reused, these contaminants should be cleaned from the column. Cleaning-in-Place helps eliminating materials and preventing progressive buildup of contaminants.

To removal of precipitated or denatured substances:

Wash with 2 column volumes of 6M guanidine hydrochloride, immediately followed by 5 column volumes of PBS, pH 7.4.

To removal of hydrophobically bound substances:

Wash with 3-4 column volumes of 70% ethanol or 2 column volumes of 1% TritonX-100, immediately followed by 5 column volumes of PBS, pH 7.4.

Recommended Products

Catalog No.	Product Name
KTP2030	PurKine™ Biotin-Tag Protein Purification Kit (Streptavidin)
KTP2001	PurKine™ His-Tag Protein Purification Kit (Ni-NTA)
KTP2010	PurKine™ GST-Tag Protein Purification Kit (Glutathione)
KTP2020	PurKine™ MBP-Tag Protein Purification Kit (Dextrin)
KTP2140	PurKine™ Endotoxin Removal Kit (Polymyxin B)
KTP2070	PurKine™ Antibody Purification Kit (Protein A/G)

Disclaimer

The reagent is only used in the field of scientific research, not suitable for clinical diagnosis or other purposes.