PurKine™ Strep II-Tag Strep-Tactin Resin 4FF

Cat #: BMR2040 Size: 2 mL/10 mL

	Strep II-Tag Strep-Tactin Resin 4FF, crosslinked 4% agarose, with streptavidin as ligand		
REF	**Cat #:** BMR2040	LOT	**Lot #:** Refer to product label
	Capacity: 6 mg Strep-tag II protein/mL		**Bead size:** 45-165 μm
	Maximum Flow rate : 300 cm/h		**Buffer:** 1×PBS containing 20% ethanol
	Storage: Stored at 4℃ for 12 months		

Assay Principle

PurKine™ Strep II-Tag Strep-Tactin Resin 4FF can be used to purify Strep-tag II protein from any expression system including baculovirus, mammalian cells, yeast and bacteria. Strep-tag II is a short sequence composed of 8 amino acids (Trp-Ser-His-Pro-Gln-Phe-Glu-Lys), which has a negligible effect on the recombinant protein, so there is no need to remove the tag. Strep-Tactin is one of the most stable proteins. It is coupled to highly cross-linked 4% agarose, which makes the fusion protein affinity purified under physiological conditions and ensures the biological activity of protein. Strep-Tactin Resin 4FF has high tolerance and can be used multiple times.

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/Wash Buffer: 100 mM Tris-HCl, 150 mM NaCl, 1 mM EDTA, pH 8.0

(Optional) PBS：20 mM sodium phosphate, 280 mM NaCl, 6 mM potassium chloride, pH7.4

Elution Buffer: 2.5 mM desthiobiotin in Binding Buffer

Regeneration Buffer: 1 mM HABA (2-[4'-hydroxy-benzeneazo] benzoic acid) in Binding Buffer

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.

Procedure for Sample Purification

1. Fill the pipe of the pump with deionized water. Remove the top and bottom stopper, connect the column to the chromatographic system and screw it tightly.
2. Wash resin with 3-5 resin-bed volumes of deionized water and allow buffer to drain from the column.
3. Add at least 5 resin-bed volume Binding Buffer to the column. Equilibrate the column (make the Strep-Tactin Resin 4FF in the same buffer system as the target protein to protect the protein). Allow buffer to drain from the column.
4. Use a pump or sample loop to add the prepared protein extract to the resin.

Note: Adding too much sample may cause excessive back pressure; The increased viscosity of the sample also leads to excessive back pressure even if the sample volume is small; Be careful not to exceed the resin's binding capacity.

5. Wash Strep-Tactin Resin with Wash Buffer and collect the flow-through. Repeat this step using a new collection tube until the UV absorbance of the flow-through fraction reaches a stable baseline (generally at least 10-15 resin-bed volume Wash Buffer).

6. Add 5-10 resin-bed volume Elution Buffer to the column to wash the target protein. The collected eluate is the target protein solution.

7. The flow-through, eluted protein and prepared protein extract can be directly analyzed by SDS-PAGE to test the purification effect.

Strep-Tactin Resin 4FF Regeneration

Regeneration: Wash resin with 5 resin-bed volumes of deionized water; Regenerate with 15 resin-bed volumes of Binding Buffer containing 1mM HABA; Wash the resin with 30 resin-bed volumes of Binding Buffer. Desthiobiotin is replaced by the yellow solution HABA, which turns red once it is compounded with Strep-Tactin. HABA is then removed by the Binding Buffer and the column can be reused.

Equilibrium: Add 5 resin-bed volumes of Binding Buffer to the column.

Store: Store resin in an equal volume of 20% ethanol at 4℃ to prevent the resin from being contaminated by bacteria.

Chemical Compatibilities

Reducing agents	50 mM DTT, 50 mM β-mercaptoethanol
Non-Ionic Detergents	Max.0.88% Octyltetraoxyethylene (C_8E_4), 0.12% Decylpentaoxyethylene ($C_{10}E_5$) 0.03% $C_{10}E_6$, 0.005 % $C_{12}E_8$, 0.023% Dodecyl nonaoxyethylene (Thesit) ($C_{12}E_9$) 0.35% Decyl-β-D-maltoside (DM), 0.007% N-dodecyl β-D-maltoside (LM) 0.2% N-nonyl-β-D-glucopyranoside (NG), 2.34% N-octyl-β-D-glucopyranoside (OG), 2 % Triton X-100 (TX), 2 % Tween 20
Ionic Detergents	2% N-lauryl-sarcosine, 1.32% N-octyl-2-hydroxy-ethylsulfoxide (8-HESO) 0.1 % Sodium-N-dodecyl sulfate (SDS)
Zwitter-Ionic Detergents	0.1% CHAPS, 0.034 % N-decyl-N, N-dimethylamine-N-oxide (DDAO) 0.13% N-dodecyl-N, N-dimethylamine-N-oxide (LDAO)
Other	2 M Ammonium sulfate $(NH_4)_2SO_4$, Max.1 M $CaCl_2$, 10% Ethanol 50 mM EDTA, Max.1 M Guanidine, Max.25% Glycerol Max.250 mM Imidazole, 1 M $MgCl_2$, 5 M NaCl, Max.1 M Urea

Recommended Products

Catalog No.	Product Name
BMR2020	PurKine™ MBP-Tag Dextrin Resin
BMR2030	PurKine™ Biotin-Tag Streptavidin Resin 6FF

Disclaimer:

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