

Chitin Resin



1-800-632-7799
info@neb.com
www.neb.com



S6651S 021150118011

S6651S

20 ml Lot: 0211501

Store at 4°C Exp: 1/18

Description: An affinity matrix for the isolation of target proteins fused to an intein-chitin binding domain fusion (1).

Source: A pure chitin resin supplied as a 40 ml slurry in 20% ethanol. The column is poured and after washing with five column volumes of buffer it is ready for use.

Binding Capacity: 2.0 mg maltose-binding protein/ml bed volume released from the resin after cleavage of the fusion protein expressed from pMYB5.

Quantitative Analysis: Crude extract from *E. coli* containing a plasmid expressing a maltose-binding protein-intein-chitin binding domain fusion protein is passed over a 1 ml column at 4°C. The column is washed with > 10 column volumes of 20 mM HEPES (pH 8.0) 500 mM NaCl, 0.1 mM EDTA, 0.1% Triton-X100. The column is then quickly flushed with 3 column volumes of 30 mM DTT (freshly diluted in cleavage buffer [20 mM HEPES (pH 8.0), 500 mM NaCl, 0.1 mM EDTA]). The flow to the column is stopped, and the column is left at 4°C overnight. MBP is eluted using 3 column volumes of cleavage buffer without DTT.

Regeneration: The packed chitin resin column must be stripped of both the fusion partner (intein-CBD) and the uncleaved fusion protein. Wash the column with 3 bed volumes of the 0.3 M NaOH stripping solution. Allow resin to soak 30 minutes, wash the resin with an additional 7 bed volumes of stripping solution. Wash with 20 bed volumes of water, followed by 5 bed volumes of column buffer.

Quantitative Analysis: Crude extract from *E. coli* containing a plasmid expressing a maltose-binding protein-intein-chitin binding domain fusion protein is passed over a 1 ml column at 4°C. The column is washed with > 10 column volumes of 20 mM HEPES (pH 8.0) 500 mM NaCl, 0.1 mM EDTA, 0.1% Triton-X100. The column is then quickly flushed with 3 column volumes of 30 mM DTT (freshly diluted in cleavage buffer [20 mM HEPES (pH 8.0), 500 mM NaCl, 0.1 mM EDTA]). The flow to the column is stopped, and the column is left at 4°C overnight. MBP is eluted using 3 column volumes of cleavage buffer without DTT.

Regeneration: The packed chitin resin column must be stripped of both the fusion partner (intein-CBD) and the uncleaved fusion protein. Wash the column with 3 bed volumes of the 0.3 M NaOH stripping solution. Allow resin to soak 30 minutes, wash the resin with an additional 7 bed volumes of stripping solution. Wash with 20 bed volumes of water, followed by 5 bed volumes of column buffer.

Notes: We recommend using gravity flow to run the column. The column should have a wide diameter.

The column may be regenerated 5 times.

Store at 4°C. The used resin should be stored in column buffer. For long term storage add 0.02% sodium azide to the column buffer.

References:

1. Chong, S., Mersha, F.B., Comb, D.G., Scott, M.E., Landry, D., Vence, L.M., Perler, F.B., Benner, J., Kucera, R.B., Hirvonen, C.A., Pelletier, J.J., Paulus, H., and Xu, M.-Q. (1997). Single-column purification of free recombinant proteins using a self-cleavable affinity tag derived from a protein splicing element. *Gene* 192, 271–281.

Notes: We recommend using gravity flow to run the column. The column should have a wide diameter.

The column may be regenerated 5 times.

Store at 4°C. The used resin should be stored in column buffer. For long term storage add 0.02% sodium azide to the column buffer.

References:

1. Chong, S., Mersha, F.B., Comb, D.G., Scott, M.E., Landry, D., Vence, L.M., Perler, F.B., Benner, J., Kucera, R.B., Hirvonen, C.A., Pelletier, J.J., Paulus, H., and Xu, M.-Q. (1997). Single-column purification of free recombinant proteins using a self-cleavable affinity tag derived from a protein splicing element. *Gene* 192, 271–281.

Average Elemental Analysis of Chitin Resin

| Element | Chitin Resin | % Theoretical |
|---------|--------------|---------------|
| C | 42.7% | 46.7% |
| O | 40.7% | 41.5% |
| H | 7.0% | 6.4% |
| N | 6.2% | 5.6% |

Notice to Buyer/User: The buyer and user have a nonexclusive license to use this system or any component thereof for research purposes only. A license to use this system or any components thereof for commercial purposes is available from New England Biolabs, Inc.

Information presented herein is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Nothing herein is to be construed as recommending any practice or any product in violation of any patent or violation of any law or regulation. It is the user's responsibility to determine for himself or herself the suitability of any material and/or procedure for a specific purpose and to adopt such safety precautions as may be necessary.

CERTIFICATE OF ANALYSIS

Chitin Resin



1-800-632-7799
info@neb.com
www.neb.com



S6651S 021150118011

S6651S

20 ml Lot: 0211501

Store at 4°C Exp: 1/18

Description: An affinity matrix for the isolation of target proteins fused to an intein-chitin binding domain fusion (1).

Source: A pure chitin resin supplied as a 40 ml slurry in 20% ethanol. The column is poured and after washing with five column volumes of buffer it is ready for use.

Binding Capacity: 2.0 mg maltose-binding protein/ml bed volume released from the resin after cleavage of the fusion protein expressed from pMYB5.

Average Elemental Analysis of Chitin Resin

| Element | Chitin Resin | % Theoretical |
|---------|--------------|---------------|
| C | 42.7% | 46.7% |
| O | 40.7% | 41.5% |
| H | 7.0% | 6.4% |
| N | 6.2% | 5.6% |

Notice to Buyer/User: The buyer and user have a nonexclusive license to use this system or any component thereof for research purposes only. A license to use this system or any components thereof for commercial purposes is available from New England Biolabs, Inc.

Information presented herein is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Nothing herein is to be construed as recommending any practice or any product in violation of any patent or violation of any law or regulation. It is the user's responsibility to determine for himself or herself the suitability of any material and/or procedure for a specific purpose and to adopt such safety precautions as may be necessary.

CERTIFICATE OF ANALYSIS

