

Protein Purification Products

Protein purification products from MACHEREY-NAGEL



GST- and His-Tag purification

Save money without making compromises

Protino® Glutathione Agarose 4B

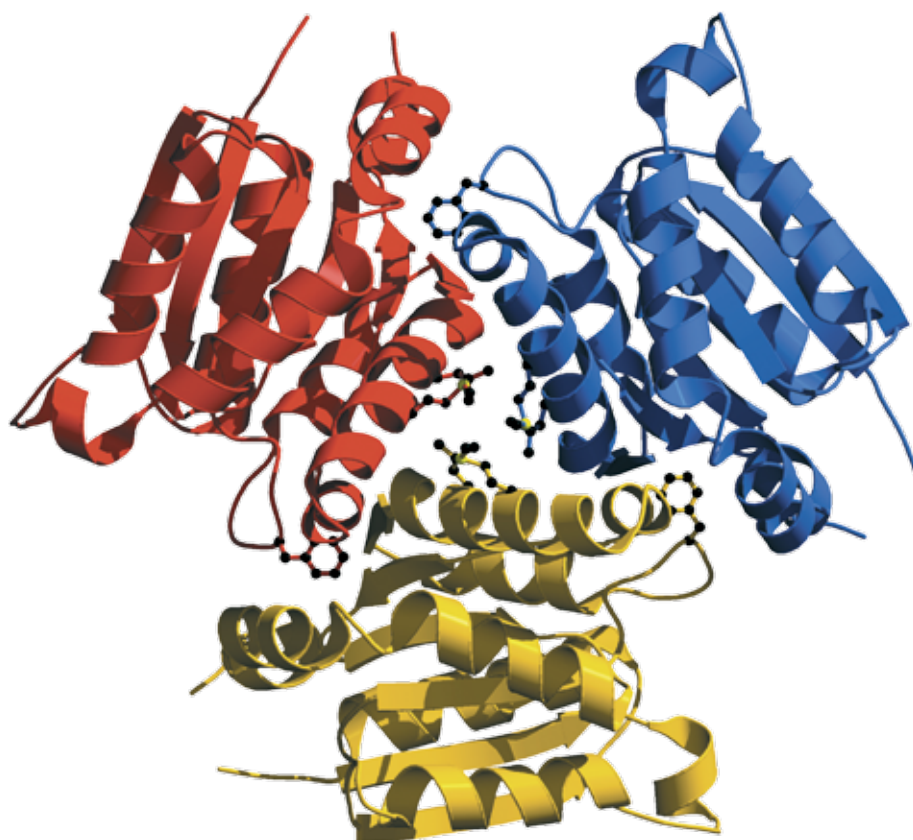
Protino® Ni-NTA

Protino® Ni-TED

Protino® Ni-IDA

BIOKÉ
sharing knowledge

Plesmanlaan 1d
2333 BZ Leiden
The Netherlands
T. +31 (0)71 568 10 00
T. Belgium: 0800 71640
F. +31 (0)71 568 10 10
info@bioke.com
www.bioke.com



... market leading performance for individual needs

MACHEREY-NAGEL

www.mn-net.com



Since 1911

Protino® Glutathione Agarose 4B

Protino® GST/4B Columns

GST-tag Purification

- ▶ **Market leading performance for an unbeatable price**
- ▶ **Just copy and paste your procedure – no protocol change**
Protino® Glutathione Agarose 4B – equivalent to Glutathione Sepharose™ 4B
Protino® GST/4B Columns – equivalent to GSTrap™ 4B columns
- ▶ **Universal usage – suitable for small, large proteins, and even low expressed proteins**
4% beaded agarose (non cross-linked) allows purification of any protein size
- ▶ **Any application possible**
Protino® Glutathione Agarose 4B – bulk resin for batch purification, gravity flow columns, and FPLC™
Protino® GST/4B Columns – prepacked ready-to-use FPLC™ columns

Product at a glance

Matrix	4% beaded agarose
Ligand	Glutathione
Bead size	90 µm
Binding capacity*	> 8 mg/mL
Max linear flow rate	250 cm/h
Format	Bulk resin (75% aqueous suspension in 20% ethanol), ready-to-use 1 mL and 5 mL FPLC™ columns



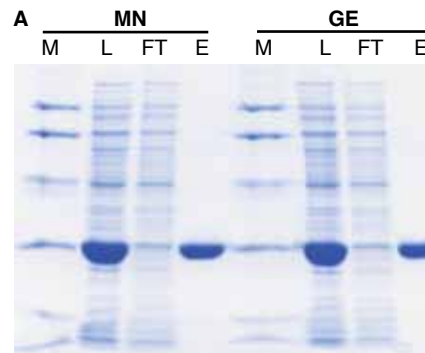
Application data

Realizing highest standards

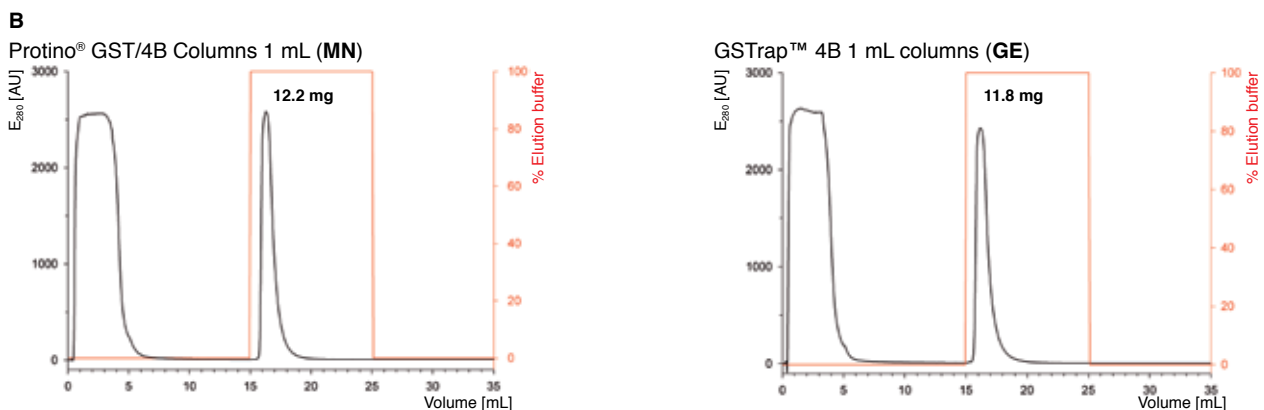
Protino® GST/4B Columns 1 mL show high performance for purification of recombinant Glutathione-S-Transferase on ÄKTAprime™ plus. Yield and purity are comparable to GSTRap™ 4B 1 mL columns.

A: SDS-PAGE of pooled elution fractions.

B: Chromatograms FPLC™ application, system ÄKTAprime™ plus, 2.6 mL sample volume, yield 12.2 mg (MN), 11.8 mg (GE).



M Markers
L *E. coli* lysate
FT Column flow-through
E Eluate



* Binding capacity will vary for each GST-tagged protein

Protino® Ni-NTA Agarose

Protino® Ni-NTA Columns

His-tag Purification – agarose based

▶ **Save money without making compromises**

▶ **Highest performance equivalent to market leading Ni-NTA products**

Simply replace your current Ni-NTA Agarose, neither optimization nor protocol change

▶ **High capacity and high affinity**

Up to 50 mg/mL binding capacity*

▶ **Ready-to-use resin/columns for any application**

Protino® Ni-NTA Agarose – bulk resin for batch purification, gravity flow columns and FPLC™

Protino® Ni-NTA Columns – prepacked ready-to-use FPLC™ columns



Product at a glance

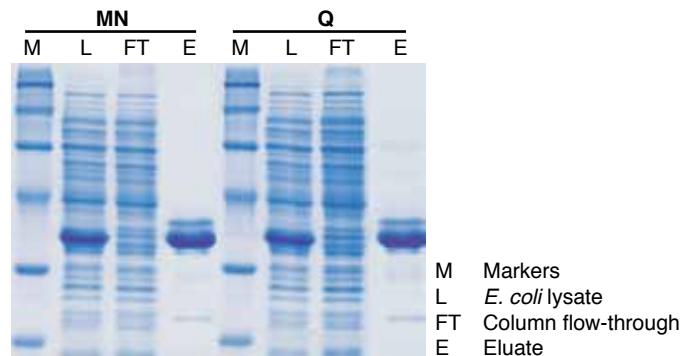
Matrix	6 % beaded agarose (cross linked), precharged with Ni ²⁺
Chelating ligand	NTA (nitrilotriacetic acid)
Bead size	45 – 165 µm
Binding capacity*	Up to 50 mg/mL
Max linear flow rate	300 cm/h
Format	Bulk resin (50 % aqueous suspension in 30 % ethanol), ready-to-use 1 mL and 5 mL FPLC™ columns

Application data

Market leading performance

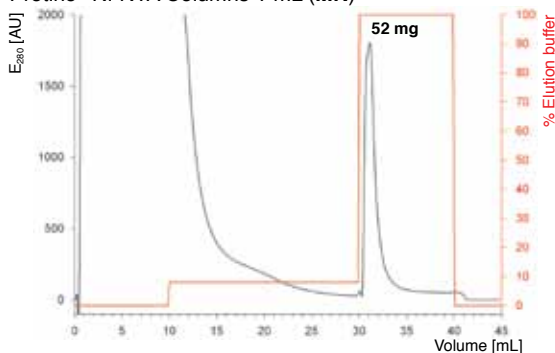
Protino® Ni-NTA Agarose shows high performance and similar yield and purity comparable to competitor Q's Ni-NTA Agarose.

Equivalent amounts of clarified *E. coli* lysate containing His-tagged green fluorescent protein (GFP) were used as samples for the comparison.

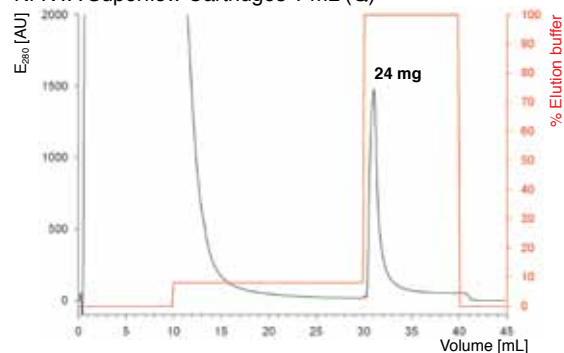


Higher yields for large proteins

Protino® Ni-NTA Columns 1 mL (MN)



Ni-NTA Superflow Cartridges 1 mL (Q)



Superior yields were obtained when using Protino® Ni-NTA Columns – as compared to Q's cartridges. Equivalent amounts of clarified *E. coli* lysate containing His-tagged aspartase protein were used as samples for the comparison. The yield of aspartase (208 kDa tetramer), purified by crosslinked agarose (Protino® Ni-NTA Columns), is higher than the yield of the protein isolated with highly cross-linked Superflow matrix (Q's Ni-NTA Superflow Cartridges).

* Binding capacity will vary for each His-tagged protein

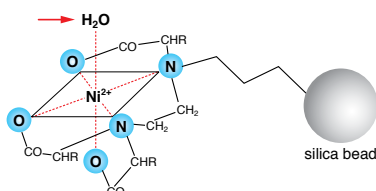
Protino® Ni-TED

His-tag Purification – silica based

- ▶ **Highest binding specificity → highest purity**
- ▶ **Minimum metal-ion leakage**
- ▶ **Optimal for crystallography and functionality assays**

Product at a glance

Chelating ligand	TED (tris-carboxymethyl ethylene diamine)
Binding capacity*	10 mg/g
Format	Bulk resin, gravity-flow columns



5 out of 6 binding sites of Ni²⁺-ion for complexing TED (tris-carboxymethyl ethylene diamine), one for selective His-tag binding (→)
 → Highest specificity of Ni²⁺ to His-tagged proteins
 → Minimum metal-ion leakage

Protino® Ni-IDA

His-tag Purification – silica based

- ▶ **Fair balance of yield and purity**
- ▶ **Convenient 96-well format for screening purposes**
- ▶ **Unique silica concept**

Product at a glance

Chelating ligand	IDA (iminodiacetic acid)
Binding capacity*	20 mg/g
Format	Bulk resin, gravity-flow columns, 96-well plate



Ordering Information

GST-tag purification	Binding capacity*	Pack of	REF
Protino® Glutathione Agarose 4B	> 8 mg/mL	10 mL / 100 mL	745500.10 / .100
Protino® GST/4B Columns 1 mL	10 mg	5 x 1 mL	745510.5
Protino® GST/4B Columns 5 mL	50 mg	1 x 5 mL / 5 x 5 mL	745515.1 / .5
His-tag purification (Ni-NTA)			
Protino® Ni-NTA Agarose	≤ 50 mg/mL	25 mL / 100 mL / 500 mL	745400.25 / .100 / .500
Protino® Ni-NTA Columns 1 mL	≤ 50 mg	5 x 1 mL	745410.5
Protino® Ni-NTA Columns 5 mL	≤ 250 mg	1 x 5 mL / 5 x 5 mL	745415.1 / .5
His-tag purification (Ni-TED)			
Protino® Ni-TED Resin	10 mg/g (5 mg/mL)	5 / 30 / 120 / 600 g	745200.5 / .30 / .120 / .600
Protino® Ni-TED 150 Packed Columns	400 µg	10 / 50	745100.10 / .50
Protino® Ni-TED 1 000 Packed Columns	2.5 mg	5 / 50	745110.5 / .50
Protino® Ni-TED 2 000 Packed Columns	5 mg	5 / 25	745120.5 / .25
His-tag purification (Ni-IDA)			
Protino® Ni-IDA Resin	20 mg/g (10 mg/mL)	5 / 30 / 120 / 600 g	745210.5 / .30 / .120 / .600
Protino® Ni-IDA 150 Packed Columns	800 µg	10 / 50	745150.10 / .50
Protino® Ni-IDA 1 000 Packed Columns	5 mg	5 / 50	745160.5 / .50
Protino® Ni-IDA 2 000 Packed Columns	10 mg	5 / 25	745170.5 / .25
Protino® 96 Ni-IDA	1 mg/well	1 x 96 / 4 x 96	745300.1 / .4

Your local distributor

* Binding capacity will vary for each His-tagged protein
 Sepharose™, GSTrap™, FPLC™, and ÄKTAprime™ are trademarks of GE Healthcare company.

www.mn-net.com

MACHEREY-NAGEL



MACHEREY-NAGEL GmbH & Co. KG · Neumann-Neander-Str. 6-8 · 52355 Düren · Germany

Germany and international:
 Tel.: +49 (0) 24 21 96 90
 Fax: +49 (0) 24 21 96 91 99
 E-mail: info@mn-net.com

Switzerland:
MACHEREY-NAGEL AG
 Tel.: +41 (0) 62 388 55 00
 Fax: +41 (0) 62 388 55 05
 E-mail: sales-ch@mn-net.com

France:
MACHEREY-NAGEL EUROL
 Tel.: +33 (0) 3 88 68 22 68
 Fax: +33 (0) 3 88 51 76 88
 E-mail: sales-fr@mn-net.com

USA:
MACHEREY-NAGEL Inc.
 Tel.: +1 484 821 0984
 Fax: +1 484 821 1272
 E-mail: sales-us@mn-net.com



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