

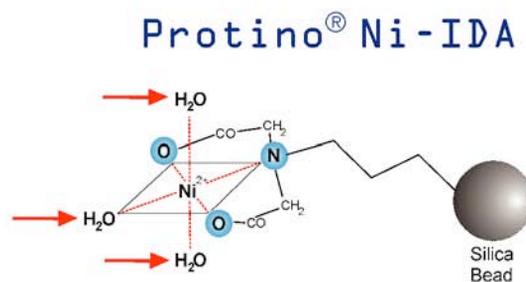
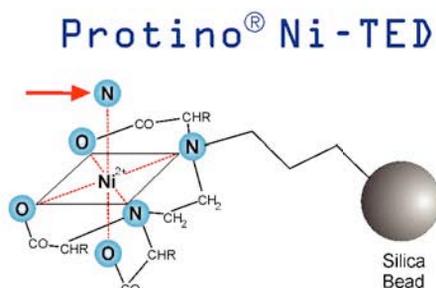
Protino[®] Ni-TED/IDA... the purer alternative for His Tag protein purification

Principle

Protino[®] Ni-TED/IDA products enable fast and convenient purification of polyhistidine-tagged proteins by immobilized metal ion affinity chromatography (IMAC). Both matrices are dry silica-based resins pre-charged with Ni²⁺ ions, developed and manufactured by MACHEREY-NAGEL.

The chelating group of Protino[®] Ni-TED is based on TED (triscarboxymethyl ethylene diamine), a strong pentadentate metal chelator. Protino[®] Ni-IDA is based on IDA (iminodiacetic acid) which is a threedentate chelator. In contrast to traditional IDA matrices, Protino[®] Ni-IDA shows an optimized low ligand density which is created by a specialized manufacturing process. This leads to improved purity with Protino[®] Ni-IDA compared to traditional IDA matrices.

The single protein binding site with Protino[®] Ni-TED as well as the low ligand density with Protino[®] Ni-IDA minimize non-specific binding of contaminating proteins to the resins. As a result both resins ensure higher target protein purity than Ni-NTA and Ni-IDA Agarose matrices.



Matrix	macroporous silica	
Chelating group	TED	IDA
Binding sites Ni²⁺ to His-Tag (→)	1	3
Binding sites ligand to Ni²⁺	5	3
Ligand density	high	low
Binding capacity*	10 mg/g resin	20 mg/g resin
Specification	high binding specificity	
	less unspecific binding of contaminating proteins compared to Ni-NTA and Ni-IDA Agarose	
	elution at low imidazole concentrations possible	
	high stability against reducing/chelating agents	high protein yield/recovery even from diluted samples
	low metal leaching	high protein concentration
	high protein purity	

* determined with 6xHis-GFPuv (32 kDa)

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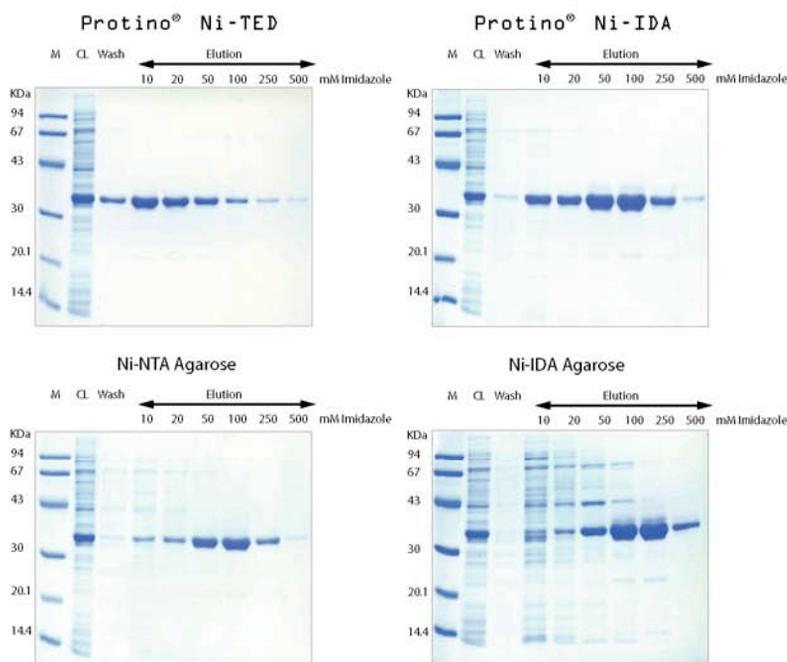
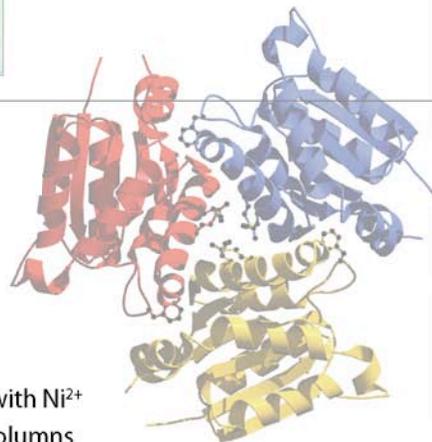


Fig. 1
Purification of polyhistidine-tagged GFPuv with Protino® Ni-TED and Protino® Ni-IDA Resin in comparison with Ni-NTA Agarose and Ni-IDA Agarose. 6xHis-GFPuv was expressed in *E. coli*, lysed, loaded onto each gravity column, and eluted by a stepwise imidazole gradient. Eluted fractions were analyzed by SDS-PAGE. Pure polyhistidine-tagged proteins can be eluted from Protino® Ni-TED and Protino® Ni-IDA at much lower imidazole concentrations than from Ni-NTA and Ni-IDA Agarose. In addition, Ni-NTA and Ni-IDA Agarose release contaminating proteins at 10 mM to 100 mM imidazole. Therefore Protino® Ni-TED and Protino® Ni-IDA are more specific for polyhistidine-tagged proteins.



Protino® Ni-TED/IDA

Features

- Silica-based material, high stability
- Dry material, storage at room temperature
- High binding specificity, high protein purity

Available formats

- Dry Protino® Ni-TED/IDA Resin, precharged with Ni²⁺
- Ready-to-use Protino® Ni-TED/IDA packed columns
- Ready-to-use 96-well plates, filled with Protino® Ni-IDA Resin
- Empty Protino® columns (14 ml/35 ml volume capacity) for use with Protino® Ni-TED/IDA Resin
- Empty 96-well Receiver Plates for use with Protino® Ni-TED/IDA Resin

Application Protino® Ni-TED/IDA Resin

- Batch binding, gravity flow chromatography, FPLC

Distributed by:

Ordering Information

Product	Capacity*	Preps	Cat. No.
Protino® Ni-TED 150 packed columns	400 µg	10/50	745100.10/50
Protino® Ni-TED 1000 packed columns	2.5 mg	5/50	745110.5/50
Protino® Ni-TED 2000 packed columns	5 mg	5/25	745120.5/25
Protino® Ni-IDA 150 packed columns	800 µg	10/50	745150.10/50
Protino® Ni-IDA 1000 packed columns	5 mg	5/50	745160.5/50
Protino® Ni-IDA 2000 packed columns	10 mg	5/25	745170.5/25
Protino® Multi-96 Ni-IDA	1 mg	1/4 x 96	745300.1/4
	Capacity*	Pack of (g)	Cat. No.
Protino® Ni-TED Resin	10 mg/g	5/30/120/600	745200.5/.30/.120/600
Protino® Ni-IDA Resin	20 mg/g	5/30/120/600	745210.5/.30/.120/600
		Pack of	Cat. No.
Protino® columns 14 ml / 35 ml		10	745250.10/745255.10
Receiver Plates 50 µm hydrophilized**		4	740689.4

* determined with 6xHis-GFPuv (32 kDa)

** other Receiver Plate versions available, please contact MN

KATENS00032 Fly_Profil_gbl/20/06/2005 FD
Printed in Germany

Protino® Ni-TED Ni-IDA

MACHEREY-NAGEL



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