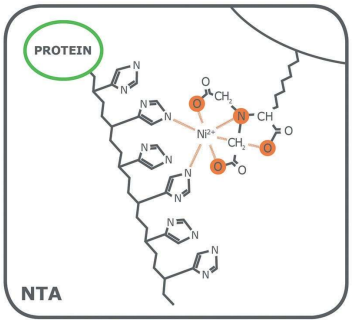
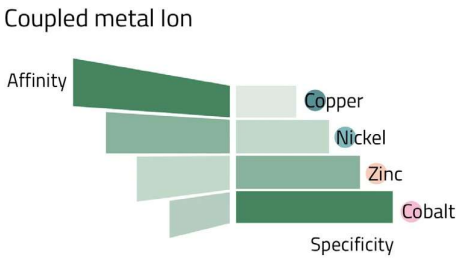
HighSpec Ni-NTA Agarose

#Cat: NB-40-00005-10ml Size: 10ml
#Cat: NB-40-00005-50-ml Size: 50ml
#Cat: NB-40-00005-250ml Size: 250ml
#Cat: NB-40-00005-500ml Size: 500ml
#Cat: NB-40-00005-1000ml Size: 1000ml
#Cat: NB-40-00005-5000ml Size: 5000ml
#Cat: NB-40-00005-1ml Size: 1ml





Product Description

HighSpec Ni-NTA Agarose was developed for the affinity purification of proteins carrying a polyhistidine tag. This affinity chromatography matrix is based on BioWorks Workbeads, consisting of 7.5% cross-linked agarose. The material is highly porous to allow for optimal protein interaction. Cross-linked agarose is also physically very stable, making it suitable for purification processes under low pressure with flow rates up to 6 mL/min (optimal 0.5 – 2 mL/min). Our agarose is very homogeneous in size with a medium particle diameter of 40 µm, yielding a high degree of reproducibility between individual purification runs.

An NTA ligand is coupled to the agarose matrix and carefully loaded with nickel ions to obtain an affinity matrix with highest binding capacity for histidine residues. The metal ion capacity is > 15 µeqv Ni2+/mL. Other possible metal ions are Co2+, Zn2+, Fe3+, and Al3+, resulting in different affinities, e.g. for zinc-finger proteins or phosphorylated proteins. If required, the nickel ions can be removed from the agarose matrix using 5 wash steps with 100 mM EDTA, and the matrix can be recharged with a different metal ion. Alternatively, please contact us for unloaded NTA agarose matrix.

HightSpec Ni-NTA Agarose is delivered as a 50% (v/v) suspension. Therefore, 2 mL suspension will yield a 1 ml bed volume. The suspension contains 20% ethanol to prevent microbial growth.

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Protein Binding Capacity

The protein binding capacity is up to 70 mg/mL, as determined by purification of 6xHis-tagged GFP protein from E.coli cleared lysates, and quantified via spectrophotometry.

Compatibility

HightSpec Ni-NTA Agarose is very stable and can resist the following conditions in most situations:

pH 2-14, 100% methanol, 100% ethanol, 8 M urea, 6 M guanidinium hydrochloride, 30% (v/v) acetonitrile.

Technical Details	
Bead Ligand	Ni-NTA (nitrilotriacetic acid+ nickel ion)
Bead size	40 µm
Filling quantity	50% suspension. (e.g. 10 ml will be 10 ml pure beads +10 ml storage buffer)
Bead Size	40 µm
Binding capacity	80 mg protein / ml pure resin (Tested with eGFP)
Chelator stability	Stable in buffer containing 10 mM DTT and 1 mM EDTA

Shipping & Storage	
Shipping Temperature	Ambient temperature
Short-term Storage	In neutral buffer at 4°C
Long-term Storage	In neutral buffer with 20% ethanol at 4 °C

Additional Information

For the protocols and other related information about this product visist our homepage at: www.neo-biotech.com, and enter the catalogue number in the search bar above.

For purification of His-tagged proteins from dilute solutions, we recommend using highSpec Ni-NTA MagBeads. For affinity purification of GST-tagged, Rho1d4-tagged or Strep®-tagged proteins, Neo Biotech offers dedicated agarose resins, magnetic beads and prepacked cartridges.

Also available are a range of ultrapure detergents and buffers for extraction and purification of proteins. See www.neo-biotech.com.

Disclaimer

Our products are intended for molecular biology applications. These products are not intended for the diagnosis, prevention, or treatment of a disease.

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