

Product	Catalog No.	Package size
Super Cobalt NTA Affinity Resin 1ml	NB-45-00040-1	1 ml
Super Cobalt NTA Affinity Resin 10ml	NB-45-00040-10	10 ml
Super Cobalt NTA Affinity Resin 25ml	NB-45-00040-25	25 ml
Super Cobalt NTA Affinity Resin 100ml	NB-45-00040-100	100 ml

### Product Description

Super Cobalt NTA Affinity Resin was developed for the affinity purification of proteins carrying a polyhistidine tag. This affinity chromatography matrix consists 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 of 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  $\mu\text{m}$ , yielding a high degree of reproducibility between individual purification runs.

An NTA ligand is coupled to the agarose matrix and carefully loaded with cobalt ions to obtain an affinity matrix with highest binding capacity for histidine residues. The metal ion capacity is  $> 15 \mu\text{eqv Co}^{2+}/\text{mL}$ . Other possible metal ions are  $\text{Ni}^{2+}$ ,  $\text{Zn}^{2+}$ ,  $\text{Fe}^{3+}$ , and  $\text{Al}^{3+}$ , resulting in different affinities, e.g. for zinc-finger proteins or phosphorylated proteins. If required, the cobalt 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.

Super Cobalt NTA Affinity Resin 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.

### Protein Binding Capacity

The protein binding capacity is 30 mg/mL resin, as determined by purification of 6xHis-tagged GFP protein from *E.coli* cleared lysates, and quantified via spectrophotometry.

### Compatibility

Super Cobalt NTA Affinity Resin 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.

### Shipping & Storage

Shipment Temperature	Ambient temperature
Short-term Storage	In equilibration buffer (see protocol)
Long-term Storage	In 20% ethanol at 4 °C