



Histidine-tagged Protein Affinity Purification



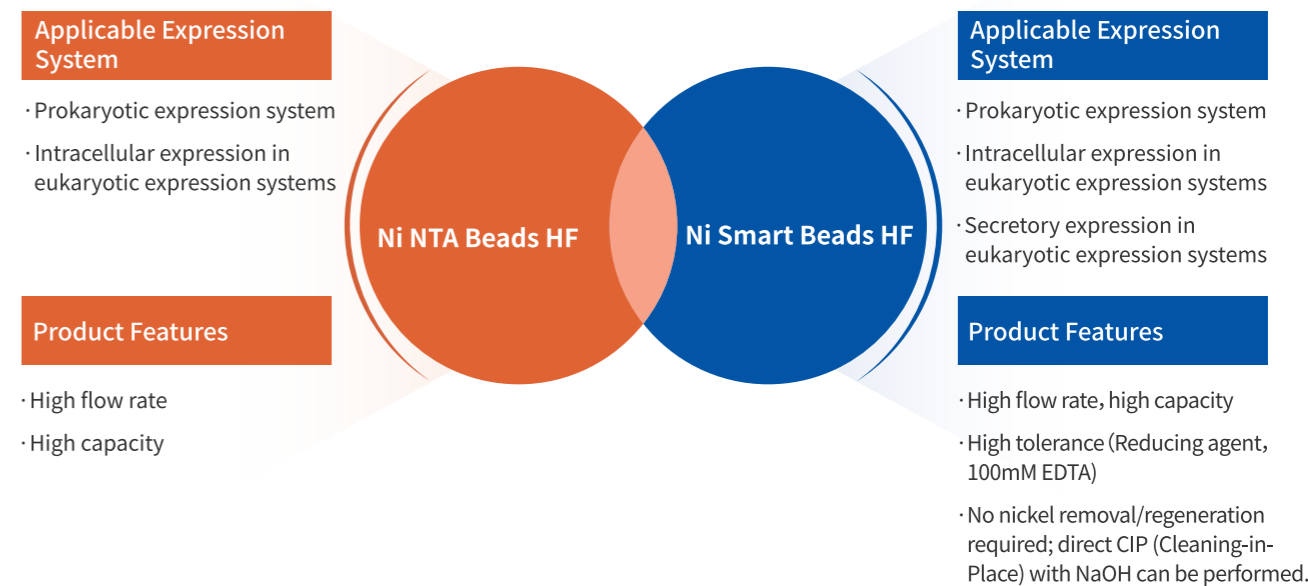
Related Products

Product	Cat. No	Size
Ni Smart Beads HF	SA110005	5 ml
	SA110025	25 ml
	SA110100	100 ml
	SA110500	500 ml
	SA11001L	1 L
	SA11010L	10L
HisCap Smart Beads HF	SA110C11	1×1 ml
	SA110C51	5×1 ml
	SA110C15	1×5 ml
	SA110C55	5×1 ml

Product Description

Immobilized Metal Affinity Chromatography (IMAC) is a chromatographic technique that exploits the specific interactions between certain amino acid residues on the protein surface (such as histidine, tryptophan, and cysteine) and immobilized metal ions to form stable chelate complexes, enabling efficient protein separation. Among these, the histidine tag (His-tag) is the most commonly used.

IMAC offers several advantages, including simple ligand structure, high binding capacity, mild separation conditions, and broad applicability. It is an essential tool for the separation and purification of recombinant proteins and is widely used to purify His-tagged fusion proteins expressed in systems such as E. coli, yeast, insect cells, and mammalian cells.



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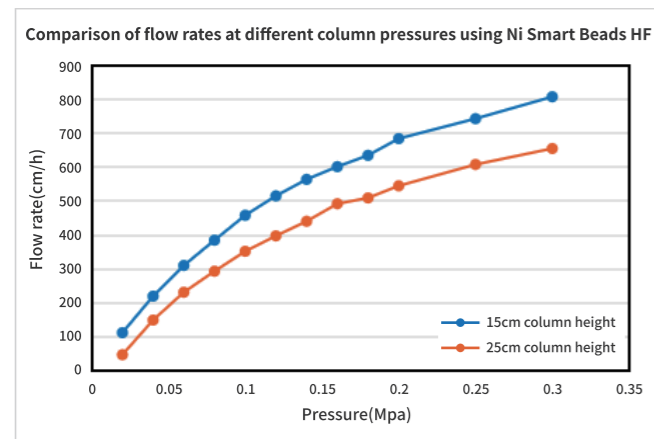
Star Product: Ni Smart Beads HF

Ni Smart Beads HF is a new Immobilized Metal Affinity Chromatography (IMAC) resin pre-charged with nickel ions. It is specifically designed for the efficient capture and purification of His-tagged recombinant proteins secreted into eukaryotic cell culture supernatants. The resin maintains high performance even in the presence of chelating agents like EDTA and reducing agents such as DTT.

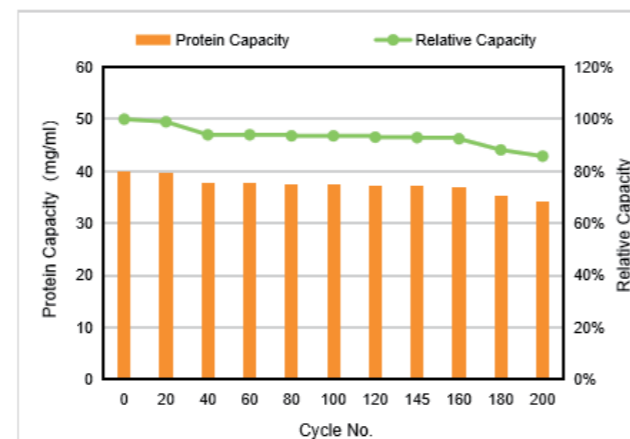
Key Advantages:

- ▶ **High Flow Rate:** Greater than 600 cm/h with pure water at 0.3 MPa.
- ▶ **High Purity:** Achieves over 90% purity in one-step chromatography step.
- ▶ **Strong Compatibility:** Tolerates a wide range of substrates and salt concentrations.
- ▶ **Versatile Applicability:** Applicable to various expression systems.

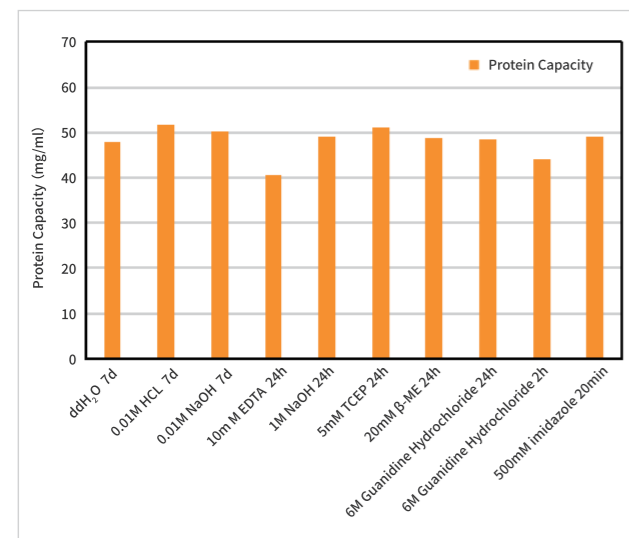
Product Parameters



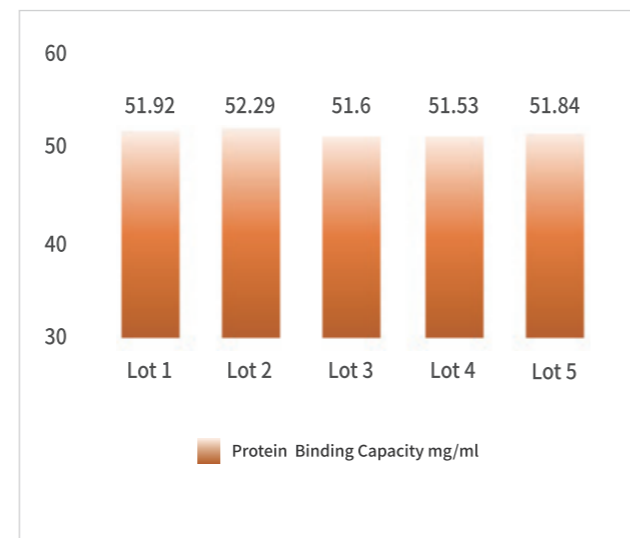
The pressure-flow rates at the heights of 15cm and 25cm columns were tested using SXX50/50 chromatography columns. The flow rate at a pressure of 0.3 MPa is greater than 600 cm/h.



Perform 200 cycles of CIP cleaning with 0.5 M NaOH. Ni Smart Beads HF maintained a stable loading of more than 80%.



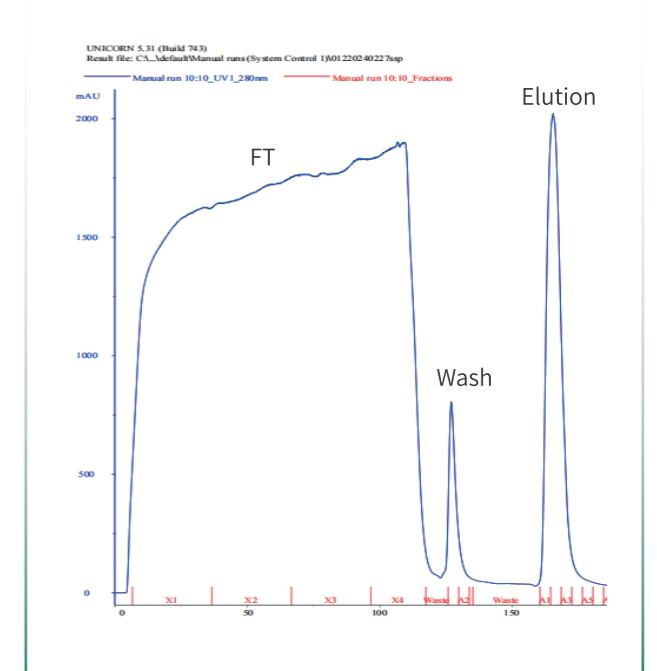
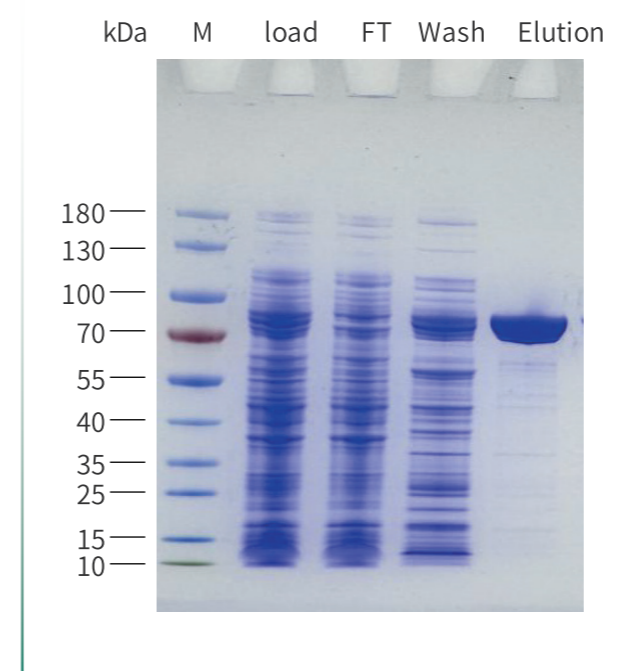
Test the tolerance stability of common chemical reagents. Ni Smart Beads HF maintains a stable protein loading in reagents such as EDTA and reducing agents.



Detect the stability of protein load in different batches. The interbatch protein loading of Ni Smart Beads HF remained stable.

Application Case

The figure below presents the separation and purification results of recombinant protein X, secreted and expressed by mammalian cells, using Ni Smart Beads HF. Without the need for ultrafiltration or buffer exchange, one-step chromatography achieved a purity of 95% (as determined by SEC-HPLC) and a yield exceeding 90%.



Product Advantages

Ensuring Product Safety and Stability

Guided by the principle of "Quality First," the company has obtained ISO 9001 Quality Management System Certification. A mature production process and standardized quality inspection system ensure data reliability and consistent product quality, providing strong assurance of safety and stability during application. This fully meets the batch production and quality requirements of industrial clients.

Complete Product Documentation Provided

A comprehensive document management system ensures the effectiveness, compliance, executability, and traceability of all materials. We provide complete product documentation, including instruction manuals, Certificates of Analysis (COA), Material Safety Data Sheets (MSDS), and more to fully support product application.

Comprehensive Solutions

We offer professional and efficient value-added services, including microsphere customization, column packing, protein labeling, ligand coupling, protein purification, and process development.

Supporting R&D to Industrial-Scale Production

We provide a full range of products and services covering all stages from laboratory research to pilot and large-scale production. This includes small-scale pre-packed columns for R&D use and chromatography resins for industrial production up to the liter scale. Our resins feature minimal batch-to-batch variation and are supplied with guaranteed consistency.

