

**KingFisher®
Dynabeads® TALON™
Customer Solution**



**Automated Purification of
Histidine-Tagged Recombinant
Proteins**

Analyze • Detect • Measure • Control™

Thermo
ELECTRON CORPORATION

Automated Purification of Histidine-Tagged Recombinant Proteins

Flexible Customer Solution for Recombinant Protein Purification

An exceptional solution for rapid and efficient histidine-tagged protein purification, combining Thermo Electron's KingFisher® technology and Dynal Biotech's superior Dynabeads® TALON™ magnetic beads. In less than 30 minutes you can purify your recombinant protein from up to 96 samples and continue with your further analysis. The final purified protein is ready for use in a variety of downstream applications such as screening for new drugs and drug targets and studying DNA-protein or protein-protein interactions.



KingFisher 96 instrument (Thermo Electron)

Unique KingFisher® technology

KingFisher magnetic particle processors are designed to automate time consuming sample preparation of proteins. These instruments use an advanced patented technology in which magnetic rods move particles through the process from sample lysis to elution of pure protein. The KingFisher technology enables automated high-speed, high-quality processing with no cross contamination between samples and no reagent carryover.

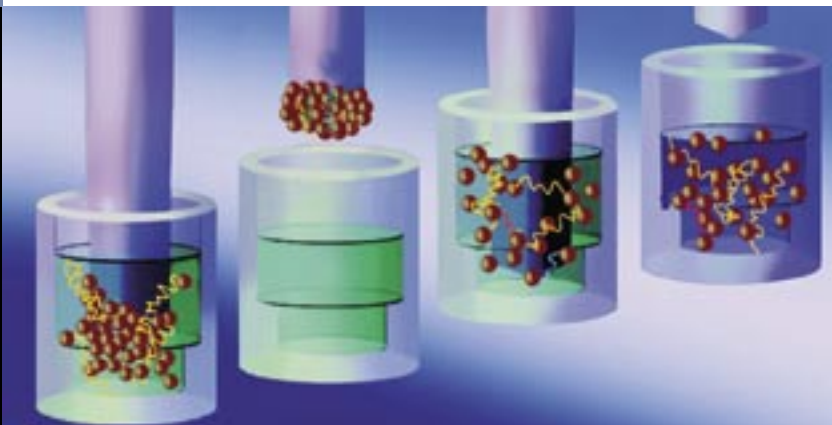
Dynabeads® TALON™

Dynal Biotech has developed the ultimate magnetic bead for isolation of histidine-tagged recombinant proteins. Dynabeads TALON™ combines magnetic separation technology with the highly specific BD TALON™ cobalt based IMAC technology.

The uniform, accessible surface of these 1 µm beads ensure rapid reaction kinetics, easy handling and excellent performance with a unique level of reproducibility. The beads are developed to have extremely low non-specific binding, an important feature for high throughput, small volume applications.



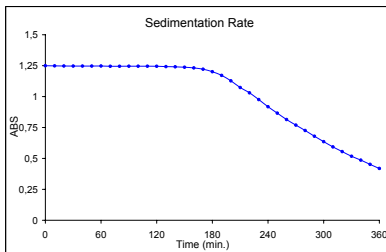
KingFisher mL instrument (Thermo Electron)



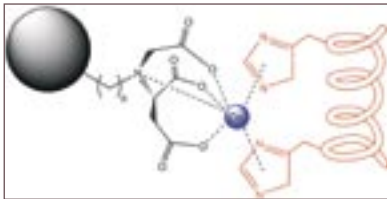
Principle of magnetic separation on KingFisher® platforms

Dynabeads® on the KingFisher® platforms

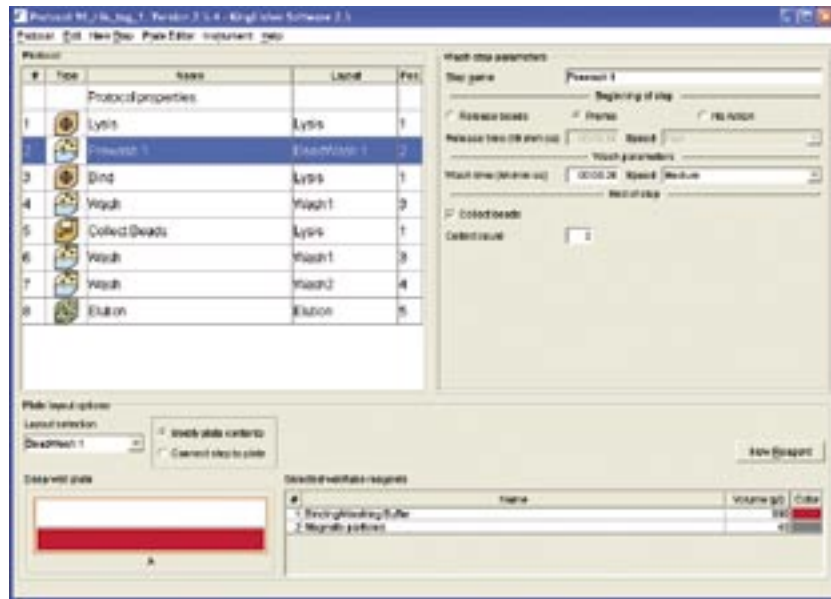
The new 1 µm beads have a high magnetic mobility resulting in efficient collection when placed in a magnetic field. Being superparamagnetic, they show no magnetic remanance when KingFisher magnetic rods are removed and they are easily dispersed in solutions. Combined with rapid handling and superior binding kinetics, their excellent ability to stay in solution makes them ideal for use on the KingFisher platforms.



Analysis of sedimentation rate for Dynabeads® TALON™



Binding of histidine-tagged recombinant protein to Dynabeads® TALON™



Easy purification with high quality results

The KingFisher 96 and KingFisher mL instruments offer suitable sample capacity and volume range for protein processing. KingFisher 96 offers flexible automation for purification of hundreds of samples per day. KingFisher mL is ideally suited for lower throughput purification within volume ranges of 50-1,000 µl. This instrument offers flexible sample capacity, accommodating up to 15 samples per run.

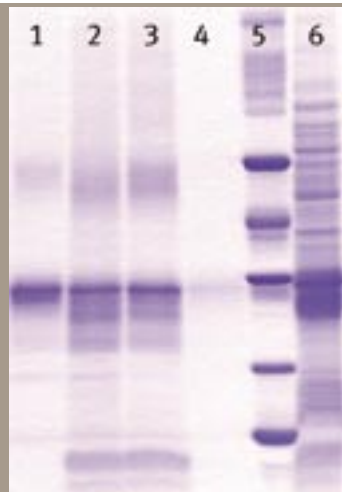
The KingFisher 96 platform also allows the direct use of 96 deep well plates containing bacterial cell

cultures. Simply start the KingFisher 96 protocol and insert your sample plate. After 30 minutes you are ready to proceed with your downstream applications. The KingFisher protein system provides a robust and reliable method for the isolation of fully functional and high purity proteins.

Customize your purification

KingFisher software allows you to develop custom-made protocols according to your protein characteristics. Protocols can be created and modified with the graphical user interface. Each processing step can be individually changed to meet the specific requirements of the sample.

Technology used for Dynabeads® TALON™ is licensed to Dynal Biotech from BD Biosciences Clontech. BD TALON™ is a trademark of Becton, Dickinson and Company.



Purification of HAT-CAT protein using Dynabeads® TALON™ and three alternative magnetic particles for histidine-tagged protein isolation.

Lanes

1. Dynabeads TALON™
2. Alternative supplier 1
3. Alternative supplier 2
4. Alternative supplier 3
5. LMW (10 µg)
6. Cell lysate

Total solution

- Dynabeads TALON™ magnetic beads
- KingFisher 96 or KingFisher mL
- Ready made protocols
- Consumables
- KingFisher software

KingFisher® instruments

- KingFisher 96
 - 96 samples per run
 - volume range 20-1000 µl
- KingFisher mL
 - 15 samples per run
 - volume range 50-1000 µl

Dynabeads® TALON™

- Cobalt-based IMAC chemistry
- Extremely low non-specific binding
- Fully functional proteins
- Uniform surface

Product number	Product description
540 00 50	KingFisher mL magnetic particle processor
540 05 00	KingFisher 96 magnetic particle processor
240 73 430	KingFisher 96 Head for Deep Well plate
970 02 131	KingFisher mL Combi 60 (tubes and tip combs for 60 samples)
970 02 530	KingFisher 96 tip comb for DW magnets, 10 pcs / box
970 02 540	KingFisher 96 plate (200 µl), 48 plates / box
101.01	Dynabeads® TALON™ 2 ml ^{*)}
101.02	Dynabeads® TALON™ 10 ml ^{*)}

^{*)} Order from Dynal Biotech



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