

## Thermo Scientific Aspire Chromatography Tips for Proteomic Research



High quality sample preparation in minutes

## Thermo Scientific Aspire Chromatography Tips



Our proteomic Aspire tips feature:

- ◆ High purity sample preparations
- ◆ Parallel sample processing
- ◆ Customized, color-coded purification workflow
- ◆ 20-minute protocol



High quality sample preparation is critically important for proteomic research. Scientists often spend hours preparing samples for subsequent downstream studies. Thermo Scientific Aspire Tips assist researchers by facilitating small-scale sample preparations in minutes, yielding pure samples in less time with less effort and accelerating proteomic research and discovery.

Introducing a range of tips that provide an intuitive color-coded workflow, high purity and yield, and parallel sample processing in 20 minutes. In addition, benefit from enhanced ergonomics and throughput with an 8-channel Thermo Scientific Novus electronic pipette with the Aspire tips for more efficient time in the lab.



**Fast sample processing with Aspire color-coded, multichannel purification workflow.**

# Aspire Protein A and Protein G Tips

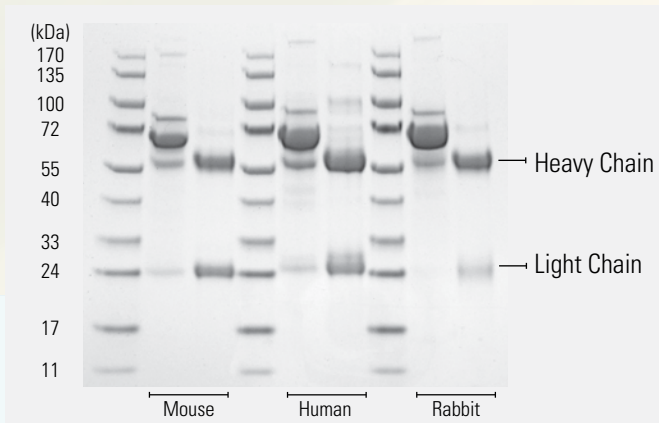


Aspire Protein A Tips

In less than 20 minutes, Aspire™ Protein A and G tips capture and purify a wide variety of monoclonal and polyclonal IgG antibodies from serum, ascites or cell culture supernatants. Each Protein A and Protein G tip contains 50 µl of Thermo Scientific Pierce Immobilized Protein A Plus and Protein G Plus Agarose respectively with binding capacities of 1 mg. Customized, color-coded purification protocols streamline and speed-up sample processing; and with a standard 1 ml multichannel pipette, multiple samples can be purified in parallel, further reducing sample processing time.

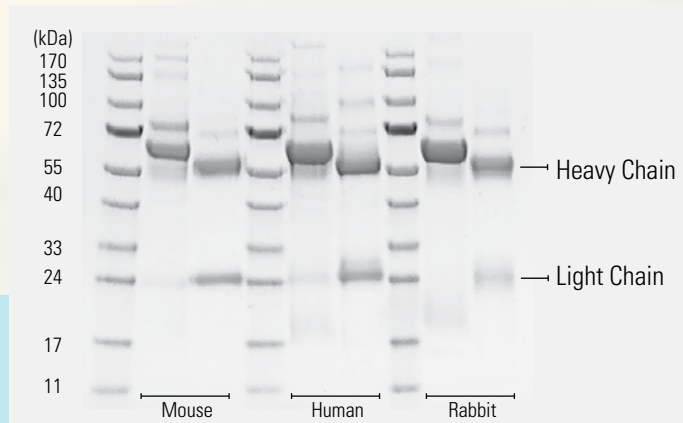
- ◆ Fast, cost-effective small-scale purification of IgG antibodies
- ◆ High purity and yield
- ◆ No lengthy centrifugation or incubation steps
- ◆ Optimized color-coded, multichannel workflow

Protein Marker  
Unprocessed Serum  
Purified IgG  
Protein Marker  
Unprocessed Serum  
Purified IgG  
Protein Marker  
Unprocessed Serum  
Purified IgG



Aspire Protein A Tips

Protein Marker  
Unprocessed Serum  
Purified IgG  
Protein Marker  
Unprocessed Serum  
Purified IgG  
Protein Marker  
Unprocessed Serum  
Purified IgG



Aspire Protein G Tips

**Fast and effective purification of IgG in sera from different hosts using Aspire Protein A and Protein G Tips.**



## IgG binding characteristics of Aspire Protein A and Protein G tips

Species	Aspire Protein A Tips	Aspire Protein G Tips
Human	YYY	YYY
Mouse	YYY	YYY
Rabbit	YYY	YYY
Rat	Y	YY
Goat	Y	YYY
Cow	Y	YYY
Sheep	Y	YYY
Horse	Y	YYY
Guinea Pig	YYY	Y
Pig	YYY	Y
Chicken	--	--
Hamster	YY	YY
Donkey	YY	YYY

### Legend of Table 1

Strong binding	YYY
Medium binding	YY
Weak binding	Y
No binding	--

Protein A and Protein G binding characteristics vary depending on the sample source. The table above shows the relative affinity of Aspire Protein A and Protein G tips to IgG antibodies across different species.



Aspire Protein G Tips

### Ordering Guide

Cat. No.	Description	Qty
990-03	Thermo Scientific Aspire Protein A Tips	96 tips/kit
990-02	Thermo Scientific Aspire Protein G Tips	96 tips/kit

*Kit Includes: 96 Aspire tips in a tip rack, color-coded tubes, rack and buffers.*

## Aspire IMAC Cobalt Tips

Aspire IMAC Cobalt Tips are ideal for fast, small-scale purification of histidine-tagged proteins. Each tip contains 50  $\mu$ l of Thermo Scientific Pierce HisPur Cobalt Resin, which binds up to 0.5 mg of his-tagged protein with higher specificity compared to conventional nickel resins. The Aspire IMAC Cobalt tips isolate high-purity proteins with less metal leaching. A customized, color-coded protocol is easy to employ and with a standard 1 ml multichannel pipette, multiple samples can be purified in parallel within 20 minutes.

- ◆ Fast, cost-effective small-scale purification of his-tagged proteins
- ◆ High purity and yield
- ◆ Low metal leaching
- ◆ No lengthy centrifugation or incubation steps
- ◆ Optimized multichannel workflow



Aspire IMAC Cobalt Tips

## Aspire RP30 Desalting Tips

Our Aspire RP30 Desalting Tips improve LC/MS/MS sensitivity and data quality in minutes. Each tip contains a bed of proprietary porous Styrene-divinylbenzene (SDVB) reversed-phase resin which allows for the removal of ion-suppressing contaminants from digested complex protein mixtures prior to LC/MS/MS analysis, giving you better MS results. Aspire RP30 desalting tips offer superior overall peptide binding and recovery compared to conventional C18 products. They also employ a rapid purification protocol to streamline low to medium-throughput sample clean-up.

- ◆ Greatly improve sensitivity and MS data quality
- ◆ Effective sample clean-up prior to LC/MS/MS analysis
- ◆ Fast and easy, 20-minute purification protocol

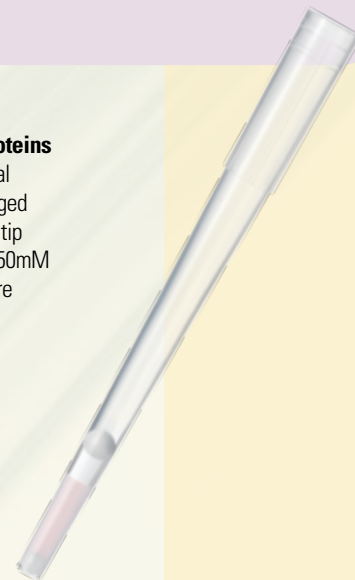


Aspire RP30 Desalting Tips

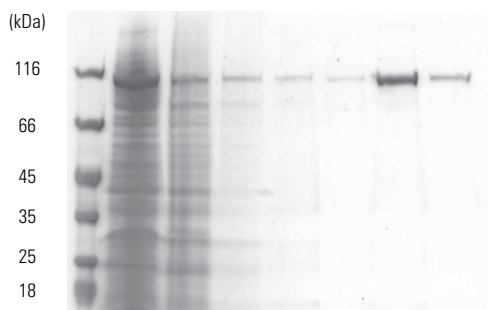
## Ordering Guide

Cat. No.	Description	Qty
990-04	Thermo Scientific Aspire IMAC Cobalt Tips	96 tips/kit

*Kit Includes: 96 Aspire tips in a tip rack, color-coded tubes, rack.*

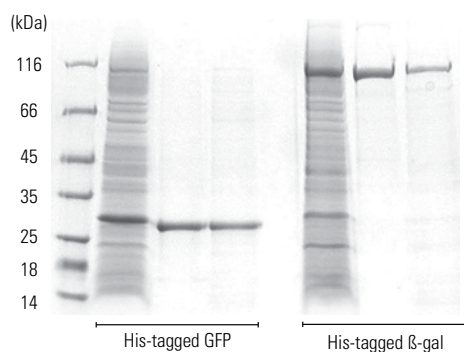


Protein Marker  
E. coli Lysate  
Flow Through  
Wash 1  
Wash 2  
Wash 3  
Elute 1  
Elute 2

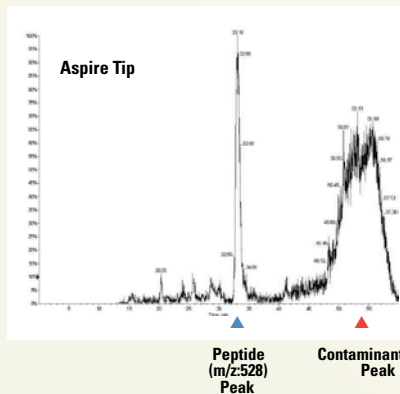
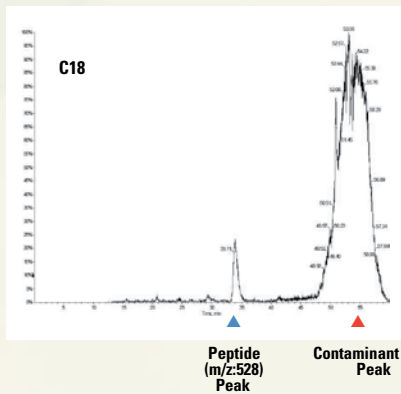
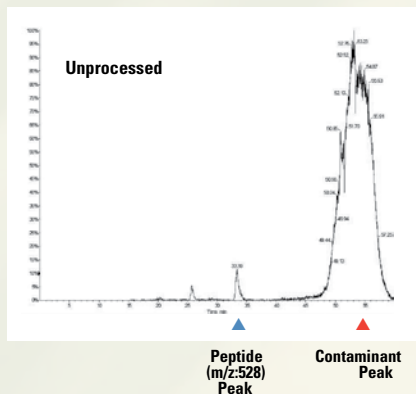


**Aspire IMAC Cobalt Tips isolate histidine-tagged proteins with high purity in minutes.** Bacterial lysate (1.5 mg total protein) containing over-expressed recombinant 6X his-tagged  $\beta$ -galactosidase was purified using an Aspire IMAC cobalt tip and eluted twice with 150  $\mu$ l of elution buffer containing 150mM imidazole. Gel lanes for the wash and elution fractions were normalized to equivalent volume.

Protein Marker  
E. coli Lysate  
Aspire Tip (Elute 1)  
Competitor G Spin Column (Elute 1)  
E. coli Lysate  
Aspire Tip (Elute 1)  
Competitor G Spin Column (Elute 1)



**The Aspire IMAC Cobalt Tips offer a more cost-effective and faster method for purifying his-tagged proteins compared to competitor's spin columns.** Bacterial lysate (1.5 mg total protein) containing over-expressed 6X his-tagged GFP and  $\beta$ -galactosidase were purified using the Aspire tips and competitor G nickel spin column. The eluates were normalized to represent equivalent elution volume. The Aspire tips purify samples with high purity and yield for a fraction of the cost.



## Aspire RP30 Desalting Tips offer superior peptide binding and recovery compared to conventional C18 products.

The mass chromatograms of a single ion corresponding to the peptide with the m/z of 528 were extracted and traced. Due to the improved peptide binding and recovery of the Aspire tip, the ratio of the target peptide peak/contaminant peak is substantially higher compared to the unprocessed sample and the sample purified by competitor's C18 product.

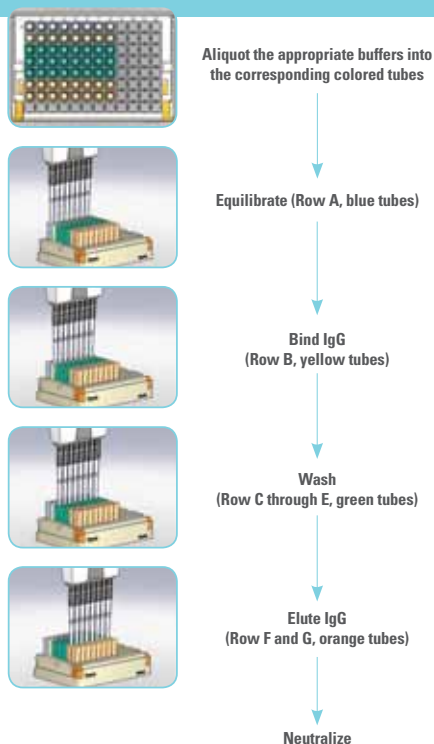
Data courtesy of Dr. Majid Ghassemian, University of California, San Diego, CA, USA.

## Ordering Guide

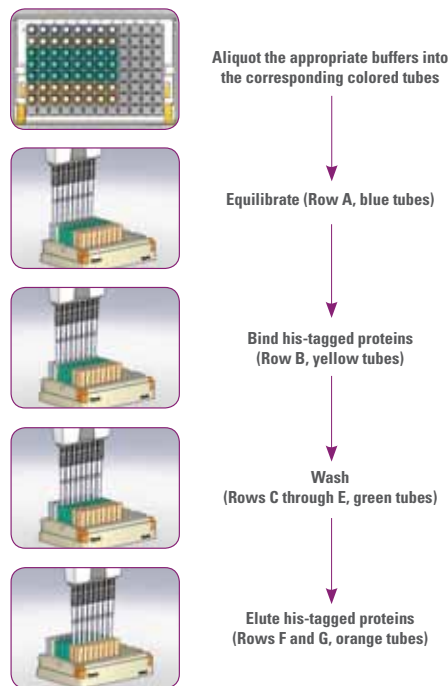
Cat. No.	Description	Qty
990-01	Thermo Scientific Aspire RP30 Desalting Tips	96 tips/kit

*Kit Includes: 96 Aspire tips in a tip rack, color-coded tubes, caps and rack.*

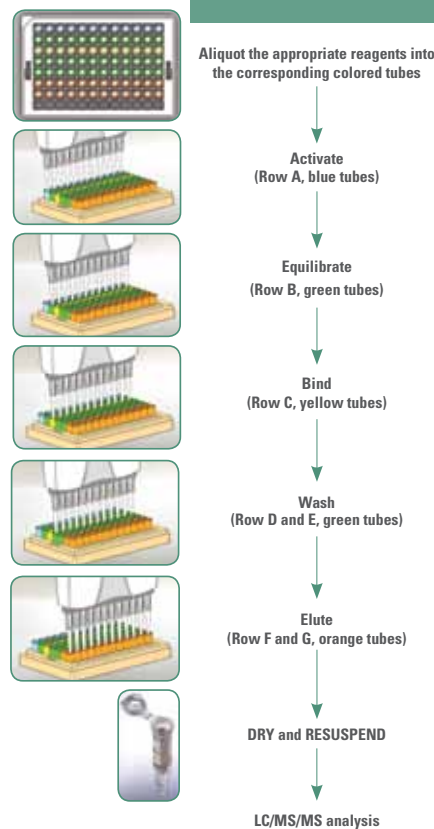
## Aspire Protein A & Protein G Tip Workflow



## Aspire IMAC Cobalt Tip Workflow



## Aspire RP30 Desalting Tip Workflow



### Ordering Guide

Cat. No.	Description	Qty
990-03	Thermo Scientific Aspire Protein A Tips	96 tips/kit
990-02	Thermo Scientific Aspire Protein G Tips	96 tips/kit
990-04	Thermo Scientific Aspire IMAC Cobalt Tips	96 tips/kit
990-01	Thermo Scientific Aspire RP30 Desalting Tips	96 tips/kit

Visit [www.thermoscientific.com/aspirevideo](http://www.thermoscientific.com/aspirevideo) for downloadable files and a demonstration video.

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