Next-generation immunoprecipitation kits for specific antigen enrichment

New kits validated for various downstream applications

Immunoprecipitation (IP) is an extremely useful method for detecting and purifying antigens. The Thermo Scientific Pierce IP Kits enable you to effectively and efficiently capture and purify antigens (Figure 1). These IP kits contain sufficient reagents to perform 50 IP reactions using 10 µl of immobilized antibody support. Three new IP kits provide more options for specific antigen purification.

Highlights Shared by all Thermo Scientific Pierce IP Kits:

- Highly effective and efficient in capturing antigens
- Minimal antibody (2-10 µg) required for IP reactions
- Optimized protocols and buffers for efficient IP's and antigen elution
- Common lysis/binding/wash buffer for all IP kits
- Included spin columns and collection tubes shorten the protocol by minimizing handling and mixing
- Compatible with specialized downstream applications such as mass spectrometry and enzymatic assays
- Flexible protocol provides the ability to scale up as needed

Classic IP Kit: The Thermo Scientific Pierce Classic IP Kit provides all the necessary reagents, spin cups and collection tubes to perform successful IP experiments with ease. The included IgG elution buffer provides milder and less denaturing recovery of antibody-antigen complexes than the traditional method of boiling in SDS-PAGE reducing sample buffer. This elution method offers more possibilities for downstream applications. This kit can be used for traditional IP experiments using antibodies that bind to protein A or protein G. This new kit performs better than the standard method because it contains a high-capacity protein A/G resin for capturing more antibodies from a wider range of mammalian species.

Classic IP Kit Highlights:

- High binding-capacity recombinant protein A/G plus agarose resin results in higher antigen yields
- Recombinant protein A/G Plus resin enables a wide range of mammalian IgG species to be used for IP reactions

Crosslink IP Kit: The Thermo Scientific Pierce Crosslink IP Kit extends the functionality of traditional IP methods by adding crosslinking to the procedure. Crosslinking the antibody to the resin enables target protein purification without antibody contamination. Also, crosslinking allows more effective washes without releasing the antibody from the resin. This new kit has an improved crosslinking protocol optimized for maximum antibody functionality. The use of the high-capacity protein A/G resin provides maximum binding of antibodies that are oriented such that the antigen-binding sites are accessible.

Crosslink IP Kit Highlights:

- No antibody contamination in the eluate
- Improved crosslinking protocol optimized for maximum antibody functionality
- High binding-capacity recombinant protein A/G plus agarose resin results in higher antigen yields
- Recombinant protein A/G Plus resin enables a wide range of mammalian IgG species to be used for IP reactions
- Bound immunoglobulins are oriented such that the antigen-binding sites are more accessible

Direct IP Kit: The Thermo Scientific Pierce Direct IP Kit uses an activated resin for directly coupling antibodies to the support resin. The benefit is immobilization of antibodies independent of species and class. Our Direct IP Kit is highly effective, producing efficient IP reactions with less than 10 µg of antibody using a short coupling procedure. The improved protocol and included buffers result in high antigen yield without antibody contamination.

Direct IP Kit Highlights:

- No antibody contamination in the eluate
- IP with any antibody species and class
- Requires a purified antibody in a solution free of amines and stabilizing proteins
- Activated resin for directly coupling antibodies to the support resin
- Reduced time for antibody coupling (1 to 2 hours)

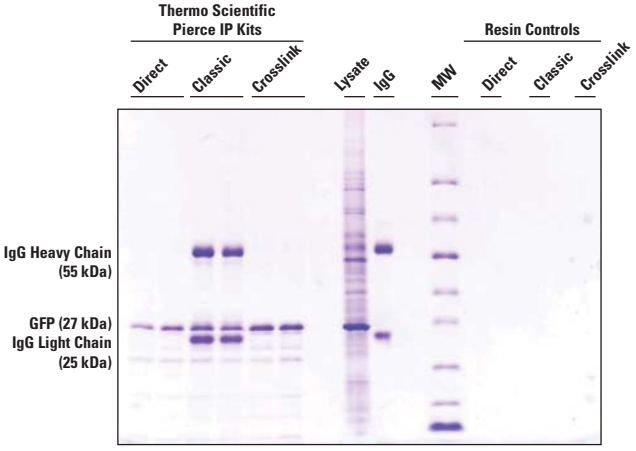

Figure 1. Comparison of green fluorescent protein (GFP) immunoprecipitations using the Thermo Scientific Pierce IP Kits. Immunoprecipitations were performed according to the product instructions using 10 µg of affinity-purified goat anti-GFP antibody and the Pierce Direct, Classic and Crosslink IP Kits. The cell lysate was prepared using IP Lysis/Wash Buffer and pre-cleared using the Pierce Control Agarose Resin supplied in the kits. The immune complex was formed by incubating the antibody, resin and lysate overnight. The resin was washed with IP Lysis/Wash Buffer, 1X Conditioning Buffer and eluted with Elution Buffer. For analysis, 4-20% Tris-glycine gels were loaded with 20% of the eluted sample, 5% of the cell lysate load (Lysate) and 10% of the antibody load (IgG) and stained with Thermo Scientific Imperial Protein Stain (Product # 24615). For the resin controls, the immunoprecipitation was performed without adding the antibody. MW: Thermo Scientific DyLight 549/649 Fluorescent Protein Molecular Weight Markers (Product # 26665).

Ordering Information:

Product #	Description	Pkg. Size
26146	**Pierce Classic IP Kit**	Kit
	Includes: Pierce Protein A/G Plus Agarose	0.55 ml
	IP Lysis/Wash Buffer	2 x 50 ml
	100X Conditioning Buffer	5 ml
	20X Tris-Buffered Saline	25 ml
	Elution Buffer	50 ml
	5X Lane Marker Sample Buffer, Non-reducing	5 ml
	Pierce Spin Columns – Screw Cap	50 each
	Microcentrifuge Collection Tubes	2 ml, 100 each
	Microcentrifuge Sample Tubes	1.5 ml, 50 each
	Pierce Control Agarose Resin	2 ml
26147	**Pierce Crosslink IP Kit**	Kit
	Includes: Pierce Protein A/G Plus Agarose	0.55 ml
	20X Coupling Buffer	25 ml
	DSS Crosslinker, No-Weigh Format	8 x 2 mg
	IP Lysis/Wash Buffer	2 x 50 ml
	100X Conditioning Buffer	5 ml
	20X Tris-Buffered Saline	25 ml
	Elution Buffer	50 ml
	5X Lane Marker Sample Buffer, Non-reducing	5 ml
	Pierce Spin Columns – Screw Cap	50 each
	Microcentrifuge Collection Tubes	2 ml, 100 each
	Microcentrifuge Sample Tubes	1.5 ml, 50 each
	Pierce Control Agarose Resin	2 ml
Related Products		
26148	**Pierce Direct IP Kit**	Kit
	Includes: AminoLink Plus Coupling Resin	2 ml
	20X Coupling Buffer	25 ml
	Quenching Buffer	50 ml
	Wash Solution	50 ml
	5 M Sodium Cyanoborohydride Solution	0.5 ml
	IP Lysis/Wash Buffer	2 x 50 ml
	100X Conditioning Buffer	5 ml
	20X Tris-Buffered Saline	25 ml
	Elution Buffer	50 ml
	5X Lane Marker Sample Buffer	5 ml
	Pierce Spin Columns – Screw Cap	50 each
	Microcentrifuge Collection Tubes	2 ml, 100 each
	Microcentrifuge Sample Tubes	1.5 ml, 50 each
	Pierce Control Agarose Resin	2 ml
20423	**Pierce Protein A/G Plus Agarose Resin**	2 ml
26150	**Pierce Control Agarose Resin**	10 ml

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Protein Interaction Technical Handbook

The study of protein interactions is vital to the understanding of protein function within the cell. This handbook provides background, helpful hints and troubleshooting for methods used to study these interactions, including immunoprecipitation and co-immunoprecipitation assays, pull-down assays, far-Western blotting, and crosslinking.