



PHYTIP COLUMNS WITH IMAC AFFINITY RESIN

CAPTURE-PURIFY-ENRICH™

PhyNexus has developed a unique technology for the micro scale purification of engineered proteins and antibodies which allow researchers to routinely purify and enrich sample volumes up to 1 mL. The exclusive design of the PhyTip™ columns allow for elution volumes as low as 10 μ L, thus producing enrichment factors as high as 50 x, with concentrations of purified protein of up to 5 mg/ml.

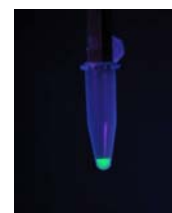
The process to purify and enrich is a simple three step technique where the protein of interest is first captured, then purified and finally enriched. The entire process can take less than 15 min to produce high concentrations of fully functional protein ready for further analysis.



Fluorescently labeled IgG before purification (200 μ L)



Fluorescently labeled IgG captured on the affinity resin of a PhyTip 200+ column



Purified and enriched IgG (10 μ L)

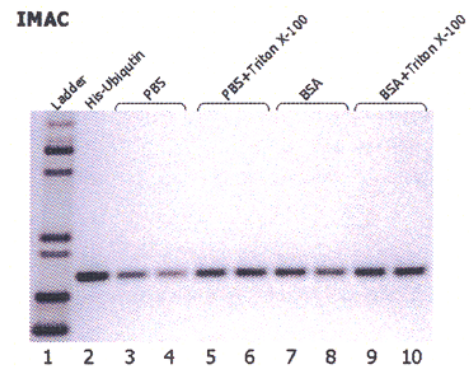
PhyTip columns are available as either Starter Kits, or to specifically fit a liquid handling platform, in two volume sizes and with a range of standard affinity resins. Simply choose the option that best fits your application.

PhyTip columns with IMAC affinity resin routinely produce purity of greater than 90% with recoveries between 60 and 70%. They are available in two formats:

- 200+ Maximum solution volume of 200 μ L, IMAC resin volume 5 μ L, with routine maximal protein mass recovery of 40 μ g.
- 1000+ Maximum solution volume of 1000 μ L, IMAC resin volume 10 μ L, with routine maximal protein mass recovery of 100 μ g.

The image to the right shows an SDS-PAGE gel of His-tagged ubiquitin (His-Ub) enriched from varying levels of background proteins using IMAC PhyTip columns. Purified protein was eluted from the column with 250 mM imidazole. Ten μ L of each sample was loaded per lane.

- Lane 2: 200 μ g/mL of the pure His-Ub.
- Lane 3,4: Duplicate enrichments of a 5 μ g/mL sample of His-Ub from PBS
- Lanes 5,6: Duplicate enrichments of a 5 μ g/mL sample of His-Ub from PBS with 1% TritonX-100
- Lanes 7,8: Duplicate enrichments of a 5 μ g/mL sample of His-Ub from PBS with 1 mg/mL BSA
- Lanes 9, 10: Duplicate enrichments of a 5 μ g/mL sample of His-Ub from PBS with 1 mg/mL BSA and 1% TritonX-100



No background proteins are detected in the enriched samples. Note that the pre-enrichment concentrations of samples in lanes 3-10 was 40X lower than the concentration of pure His-Ub in lane 2.



IMAC STARTER KITS

Starter Kits are simple to use systems for manual purification and enrichment of protein samples.

Starter Kits are designed to allow the researcher to quickly access PhyTip column technology for simple, one off experiments. Each kit ships with 48 PhyTip columns, 10 syringes, 2 syringe adaptors, associated buffers for the optimized capture, purification and enrichment technique plus simple to use instructions.

PhyTip 200+ Starter Kit with IMAC

Part Number: PTS 42-05-03

PhyTip 1000+ Starter Kit with IMAC

Part Number: PTS 41-10-03



PHYTIP COLUMNS FOR USE WITH THE PHYNEXUS PURIFICATION SYSTEMS

PhyTip columns are specifically manufactured for the PhyTip ME 200 and ME 1000 Purification Systems. Packs of 200 + PhyTip columns are available either as 96 or 48, and each pack ships with associated reagents for the optimized capture, purification and enrichment technique. Packs of 1000+ PhyTip columns are available in packs of 48 and include the associated reagents for the optimized capture, purification and enrichment process.

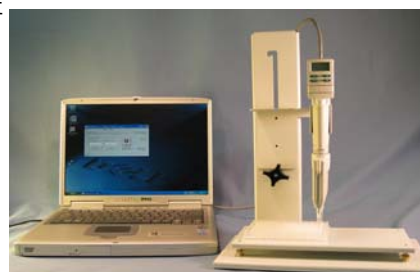
PhyTip 200+ with IMAC for use with PhyTip ME 200 Purification System

Pack of 96 PhyTip columns: Part Number PTR 92-05-03

Pack of 48 PhyTip columns: Part Number PTR 42-05-03

PhyTip 1000+ with IMAC for use with PhyTip ME 1000 Purification System

Pack of 48 PhyTip columns: Part Number PTR 41-10-03



PHYTIP COLUMNS FOR USE WITH OTHER ROBOTIC PLATFORMS

PhyTip columns are also available for a number of major robotic liquid handling systems. These are only available in the 96-well, 200 + format and include associated reagents for the optimized capture, purification and enrichment process.

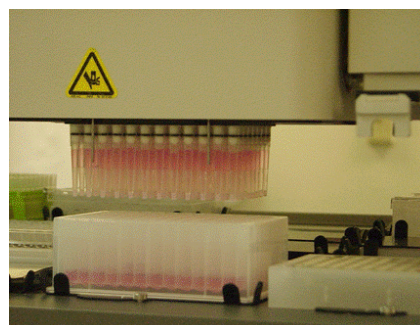
For Beckman X series Part Number PTB 92-05-03

For Tecan Temo Part Number PTT 92-05-03

For Tecan Genesis Part Number PTG 91-10-03

For Packard P235 Tips Part Number PTP 92-05-03

For Caliper Sciclone Part Number PTZ 92-05-03



PhyTip columns for high throughput purification and enrichment. 96 PhyTip columns used in an automated robotics platform.