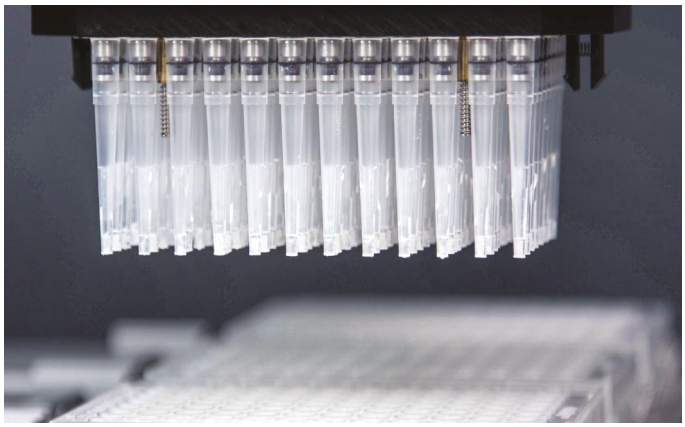
Scientific Journal Publications

PhyTip® columns have supported researchers with automated biomolecule purification since 2002. PhyTip colums uses a technology named Dual flow chromatography (DFC) and is a process of performing chromatography separations in a column bed loosely packed at the end of a pipette tip, retained by a minimally absorbing, proprietary mesh. Since the introduction of this technology in the early 2000's PhyTip columns have been used in numerous scientific publications. The list below highlights key publications since its introduction.



2023

An automated, low volume, and high-throughput analytical platform for aggregate quantitation from cell culture media

The post-translational modification profile 1 of TAR DNA-Binding Protein (TDP-43) in platelets of patients with Alzheimer's disease: An exploratory study for blood-based biomarker development

Stability and Requirement for Thiamin in a Cell Culture Feed Used to Produce New Biological Entities

2022

Non-viral precision T cell receptor replacement for personalized cell therapy

Targeted degradation via direct 26S proteasome recruitment

Loss of the intracellular enzyme QPCTL limits chemokine function and reshapes myeloid infiltration to augment tumor immunity

Autophagy and intracellular product degradation genes identified by systems biology analysis reduce aggregation of bispecific antibody in CHO cells

Rapid discovery of diverse neutralizing SARS-CoV-2 antibodies from large-scale synthetic phage libraries

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2021

Functional GLP-1R antibodies identified from a synthetic GPCR-focused library demonstrate potent blood glucose control

PD-L1+ neutrophils contribute to injury-induced infection susceptibility

2020

Concurrent transfection of randomized transgene configurations into targeted integration CHO host is an advantageous and cost-effective method for expression of complex molecules

2019

Semiautomated Small-Scale Purification Method for High-Throughput Expression Analysis of Recombinant Proteins

High-Throughput Protein Production and Purification Methods and Protocols

Perfusion cell culture for the production of conjugated recombinant fusion proteins reduces clipping and quality heterogeneity compared to batch-mode processes

Salivary N-glycosylation as a biomarker of oral cancer: A pilot study

Shedding Light into the Subcutis: A Mass Spectrometry Based Immunocapture Assay Enabling Full Characterization of Therapeutic Antibodies after Injection in Vivo

DNA-Encoded Macrocyclic Peptide Library

Direct imaging of the recruitment and phosphorylation of S6K1 in the mTORC1 pathway in living cells

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2018

Impact of cell culture media additives on IgG glycosylation produced in Chinese hamster ovary cells

Quantitative Assessment of Affinity Selection Performance by Using DNA-Encoded Chemical Libraries

Development of a Selection Method for Discovering Irreversible (Covalent) Binders from a DNA-Encoded Library

Automated high throughput microscale antibody purification workflows for accelerating antibody discovery

Pyruvate Kinase Muscle-1 Expression Appears to Drive Lactogenic Behavior in CHO Cell Lines, Triggering Lower Viability and Productivity: A Case Study

Critical considerations for immunocapture enrichment LC-MS bioanalysis of protein therapeutics and biomarkers

Development of a shake tube-based scale-down model for perfusion cultures

Conservation of oncofetal antigens on human embryonic stem cells enables discovery of monoclonal antibodies against cancer

Improved Performance in Mammalian Cell Perfusion Cultures by Growth Inhibition

Structure-Guided Combinatorial Engineering Facilitates Affinity and Specificity Optimization of Anti-CD81 Antibodies

Multi-step high-throughput conjugation platform for the development of antibody-drug conjugates

Design and Application of a DNA-Encoded Macrocyclic Peptide Library

Controlling the Glycosylation Profile in mAbs Using Time-Dependent Media Supplementation

Agonists and Antagonists of Protease-Activated Receptor 2 Discovered within a DNA-Encoded Chemical Library Using Mutational Stabilization of the Target

Randomness in DNA Encoded Library Selection Data Can Be Modeled for More Reliable Enrichment Calculation

2017

Use of a protein engineering strategy to overcome limitations in the production of "Difficult to Express" recombinant proteins

Auto-induction of Pichia pastoris AOX1 promoter for membrane protein expression

Streamlining workflow and automation to accelerate laboratory scale protein production

The Tetrameric Plant Lectin BanLec Neutralizes HIV through Bidentate Binding to Specific Viral Glycans

Modulation and modeling of monoclonal antibody N-linked glycosylation in mammalian cell perfusion reactors

Characterization of H type 1 and type 1 N-acetyllactosamine glycan epitopes on ovarian cancer specifically recognized by the anti-glycan monoclonal antibody mAb-A4

Capillary electrophoresis analysis of N-glycosylation changes of serum paraproteins in multiple myeloma

Excess reactive oxygen species production mediates monoclonal antibody-induced human embryonic stem cell death via oncosis

Discovery of a Potent BTK Inhibitor with a Novel Binding Mode by Using Parallel Selections with a DNA-Encoded Chemical Library

Quantitative Glycomics: A Combined Analytical and Bioinformatics Approach

2016

CP40 from Corynebacterium pseudotuberculosis is an endo-β-N-acetylglucosaminidase

Twoplex 12/13 C6 aniline stable isotope and linkage-specific sialic acid labeling 2D-LC-MS workflow for quantitative N-glycomics

Discovery of cofactor-specific, bactericidal Mycobacterium tuberculosis InhA inhibitors using DNA-encoded library technology

Robust factor selection in early cell culture process development for the production of a biosimilar monoclonal antibody

Process performance and product quality in an integrated continuous antibody production process

Identifying a robust design space for glycosylation during monoclonal antibody production

EndoSd: an IgG glycan hydrolyzing enzyme in Streptococcus dysgalactiae subspecies dysgalactiae

High-throughput analysis of immunoglobulin G glycosylation

Downstream process development strategies for effective bioprocesses: Trends, progress, and combinatorial approaches

Rapid N-glycan release from glycoproteins using immobilized PNGase F microcolumns

Implementation of an Automated High-Throughput Plasmid DNA Production Pipeline

From haystack to needle: finding value with DNA encoded library technology at GSK†

Expression, purification, and characterization of recombinant human and murine milk fat globule-epidermal growth factor-factor 8

Automated screening for small organic ligands using DNA-encoded chemical libraries

The Type IV Pilus Assembly ATPase PilB of Myxococcus xanthus Interacts with the Inner Membrane Platform Protein PilC and the Nucleotide-binding Protein PilM

Evaluating high-throughput scale-down chromatography platforms for increased process understanding

A Combination of Structural and Empirical Analyses Delineates the Key Contacts Mediating Stability and Affinity Increases in an Optimized Biotherapeutic Single-chain Fv (scFv)

Lessons learned in building high-throughput process development capabilities

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2015

Current advances in the development of high-throughput purification strategies for the generation of therapeutic antibodies

DNA Encoded Library Selections and Insights Provided by Computational Simulations

High-throughput purification tools for rapid upstream process development are interchangeable for biologics

Improved assembly of bispecific antibodies from knob and hole half-antibodies

Comparative glycoprofiling of HIV gp120 immunogens by capillary electrophoresis and MALDI mass spectrometry

Encoded library technology screening of hepatitis C virus NS4B yields a small-molecule compound series with in vitro replicon activity

Poly(N-vinylimidazole/ethylene glycol dimethacrylate) for the purification and isolation of phenolic acids

Use of the site-specific retargeting jump-in platform cell line to support biologic drug discovery

A simplified and robust protocol for immunoglobulin expression in Escherichia coli cell-free protein synthesis systems

Sample preparation for N-glycosylation analysis of therapeutic monoclonal antibodies by electrophoresis

Generation of potent mouse monoclonal antibodies to self-proteins using T-cell epitope "tags"

Augmented Binary Substitution: Single-pass CDR germ-lining and stabilization of therapeutic antibodies

Optimization of a simple method to transiently transfect a CHO cell line in high-throughput and at large scale

Structure of a highly acidic β-lactamase from the moderate halophile Chromohalobacter sp. 560 and the discovery of a Cs(+)-selective binding site

Automated pipeline for rapid production and screening of HIV-specific monoclonal antibodies using pichia pastoris

Identification of anti-tumour biologics using primary tumour models, 3-D phenotypic screening and image-based multi-parametric profiling

Arginine methylation and citrullination of splicing factor proline- and glutamine-rich (SFPQ/PSF) regulates its association with mRNA

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2014

Use of a protein engineering strategy to overcome limitations in the production of "Difficult to Express" recombinant proteins

Auto-induction of Pichia pastoris AOX1 promoter for membrane protein expression

Streamlining workflow and automation to accelerate laboratory scale protein production

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Discovery of a Potent BTK Inhibitor with a Novel Binding Mode by Using Parallel Selections with a DNA-Encoded Chemical Library

Quantitative Glycomics: A Combined Analytical and Bioinformatics Approach

2013

Strategy for selecting disposable bags for cell culture media applications based on a root-cause investigation

The impact of microcarrier culture optimization on the glycosylation profile of a monoclonal antibody

Combining phenotypic and proteomic approaches to identify membrane targets in a 'triple negative' breast cancer cell type

CDR-restricted engineering of native human scFvs creates highly stable and soluble bifunctional antibodies for subcutaneous delivery

Automated sample preparation for CE-SDS

Facile fabrication and instant application of miniaturized antibody-decorated affinity columns for higher-order structure and functional characterization of TRIM21 epitope peptides

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2012

High-throughput process development of chromatography steps: advantages and limitations of different formats used

Method for recovery and immunoaffinity enrichment of membrane proteins illustrated with metastatic ovarian cancer tissues

2010

Chip-based CE for rapid separation of 8-aminopyrene-1,3,6-trisulfonic acid (APTS) derivatized glycans

Mass spectrometric-based stable isotopic 2-aminobenzoic acid glycan mapping for rapid glycan screening of biotherapeutics

Widening the bottleneck: increasing success in protein expression and purification

2009

RNA Purification and Analysis: Sample Preparation, Extraction, Chromatography

Ion Chromatography, 4th, Completely Revised and Enlarged Edition

Fluorescent isotope-coded affinity tag 2: peptide labeling and affinity capture

Enrichment of Amadori products derived from the nonenzymatic glycation of proteins using microscale boronate affinity chromatography

High-throughput immunoglobulin G N-glycan characterization using rapid resolution reverse-phase chromatography tandem mass spectrometry

2008

Fluorescent isotope-coded affinity tag (FCAT). I: Design and synthesis

A simple high-throughput purification method for hit identification in protein screening

Selection against undifferentiated human embryonic stem cells by a cytotoxic antibody recognizing podocalyxin-like protein-1

Boronic acid lectin affinity chromatography (BLAC). 2. Affinity micropartitioning-mediated comparative glycosylation profiling

Sample preparation for the analysis of complex carbohydrates by multicapillary gel electrophoresis with light-emitting diode induced fluorescence detection

A microscale yeast cell disruption technique for integrated process development strategies

2007

Boronic acid-lectin affinity chromatography. 1. Simultaneous glycoprotein binding with selective or combined elution

Automated sample preparation facilitated by PhyNexus MEA purification system for oligosaccharide mapping of glycoproteins

An automated microscale chromatographic purification of virus-like particles as a strategy for process development

2006

High-throughput affinity ranking of antibodies using surface plasmon resonance microarrays

Material-enhanced laser desorption/ionization (MELDI)--a new protein profiling tool utilizing specific carrier materials for time of flight mass spectrometric analysis

2005

First meeting on Developments in Protein Interaction Analysis (DiPIA 2005). August 28-31, 2005, PA, USA

Striving for purity: advances in protein purification

Protein purification: pure but not simple

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