

Agilent AssayMAP Bravo



In this citation index, you will gain fast access to the bibliographic information for all the peer reviewed publications and Agilent Application notes, as of April 2025, that use the AssayMAP Bravo for pharmacokinetics protein sample preparation. This citation index illustrates the wide variety of ways the AssayMAP Bravo platform has been used to help generate high quality data and enable analysis on a scale that was previously considered unattainable. The peer reviewed publications and application notes are in separate sections but both are organized in reverse chronological order by publication year and within each year alphabetically. Each publication has keywords to make it easy to find publications that match your research interest. Please note that clicking on the title to each citation and application note will take you to the publication page for that citation.

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- Evosep Tip Loading (0)
- Immunocapture (18)

AssayMAP cartridge type used

- C18-5 (Reversed Phase-5 μ L resin bed) (1)
- C18-25 (Reversed Phase-25 μ L resin bed) (0)
- PAW-5 (Protein A-5 μ L resin bed) (8)
- PAW-25 (Protein A-25 μ L resin bed) (0)
- PGW (Protein G) (2)
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AssayMAP application used

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- In-Solution Digestion (4)
- On-Cartridge Reaction (4)
- Peptide Cleanup (1)
- Protein Cleanup (0)

Note: the number in parentheses by each key word is the number of peer reviewed publications plus the number of Agilent Application notes associated with this key word

AssayMAP Bravo published peer reviewed citations

2025

A novel *in vitro* serum stability assay for antibody therapeutics incorporating internal standards

Authors: Yihan Li, Rosendo Villafuerte-Vega, Vikram M. Shenoy, Heidi M. Jackson, Yuting Wang, Karen E. Parrish, Gary J. Jenkins, and Hetal Sarvaiya

Journal Citation: *mAbs* **2025**, 17(1), 2479529

Key Words: PAW-5, SAW-5, Affinity Purification, Biopharma, Pharmacokinetics, Immunocapture

2024

Intact quantitation of cysteine-conjugated antibody-drug conjugates using native mass spectrometry

Authors: Yihan Li, Yuting Wang, Vikram M. Shenoy, Shuai Niu, Gary J. Jenkins, and Hetal Sarvaiya

Journal Citation: *Rapid Communications in Mass Spectrometry* **2024**, 38(15), e9774

Key Words: SAW-5, Affinity Purification, Antibody Drug Conjugates, Biopharma, Pharmacokinetics, Immunocapture

Monitoring mAb proteoforms in mouse plasma using an automated immunocapture combined with top-down and middle-down mass spectrometry

Authors: Jonathan Dhenin, Valérie Lafont, Mathieu Dupré, Alain Krick, Christine Mauriac, and Julia Chamot-Rooke

Journal Citation: *Proteomics* **2024**, 24(3-4), e2300069

Key Words: SAW-5, Affinity Purification, On-Cartridge Reaction, Biopharma, Pharmacokinetics, Immunocapture

Preclinical Characterization of Catabolic Pathways and Metabolism of ABBV-011, a Novel Calicheamicin-Based SEZ6-Targeting Antibody-Drug Conjugate

Authors: Daniel Lador, Christine Gu, Vince Tong, Alexander Schammel, Julia Gavriluk, Anthony Haight, and Hetal Sarvaiya

Journal Citation: *Drug Metabolism and Disposition* **2024**, 52(2), 135–142

Key Words: SAW-5, Affinity Purification, Antibody Drug Conjugates, Biopharma, Pharmacokinetics, Immunocapture

The hinge-engineered IgG1-IgG3 hybrid subclass IgGh47 potently enhances Fc mediated function of anti-streptococcal and SARS-CoV-2 antibodies

Authors: Arman Izadi, Yasaman Karami, Eleni Bratanis, Sebastian Wrighton, Hamed Khakzad, Maria Nyblom, Berit Olofsson, Lotta Happonen, Di Tang, Martin Sundwall, Magdalena Godzwon, Yashuan Chao, Alejandro Gomez Toledo, Tobias Schmidt, Mats Ohlin, Michael Nilges, Johan Malmström, Wael Bahnan, Oonagh Shannon, Lars Malmström, and Pontus Nordenfelt

Journal Citation: *Nature Communications* **2024**, 15, 3600

Key Words: C18-5, PGW, Affinity Purification, Peptide Cleanup, Biopharma, Pharmacokinetics

2023

Top-Down Characterization and Intact Mass Quantitation of a Monoclonal Antibody Drug from Serum by Use of a Quadrupole TOF MS System Equipped with Electron-Activated Dissociation

Authors: John F. Kellie, Nicole A. Schneck, Jason C. Causon, Takashi Baba, John T. Mehl, and Kerstin I. Pohl

Journal Citation: *Journal of the American Society for Mass Spectrometry* **2023**, 34(1) 17–26

Key words: SAW-5, Affinity Purification, Immobilization, Biopharma, Pharmacokinetics, Immunocapture

2021

Automated and Faster Affinity Capture Method for Biotransformation Assessment of Site-Specific Antibody Drug Conjugates

Authors: Aarti Jashnani, Srikanth Kotapati, Madhura Deshpande, Sayumi Yamazoe, Pavel Strop, Arvind Rajpal, and Gavin Dollinger

Journal Citation: *Analytical Chemistry* **2021**, 93(13), 5371–5376

Key words: SAW-5, Affinity Purification, On-Cartridge Reaction, Antibody Drug Conjugates, Biopharma, Pharmacokinetics, Immunocapture

Universal Automated Immunoaffinity Purification-CE-MS Platform for Accelerating Next Generation Biologic Design

Authors: Mei Han, Yunan Wang, Kevin Cook, Noor Bala, Marcus Soto, Dan A. Rock, Josh T. Pearson, and Brooke M. Rock

Journal Citation: *Analytical Chemistry* **2021**, 93(13), 5562–5569

Key words: SAW-5, Affinity Purification, Biopharma, Pharmacokinetics, Immunocapture

2020

Chronic glucose-dependent insulinotropic polypeptide receptor (GIPR) agonism desensitizes adipocyte GIPR activity mimicking functional GIPR antagonism

Authors: Elizabeth A. Killion, Michelle Chen, James R. Falsey, Glenn Sivits, Todd Hager, Larissa Atangan, Joan Helmering, Jae Lee, Hongyan Li, Bin Wu, Yuan Cheng, Murielle M. Véniant, and David J. Lloyd

Journal Citation: *Nature Communications* **2020**, 11, 4981

Key words: PAW-5, Affinity Purification, Pharmacokinetics, Biopharma, Immunocapture

2019

Direct quantitation of therapeutic antibodies for pharmacokinetic studies using immuno-purification and intact mass analysis

Authors: Lisa A. Vasicek, Xin Zhu, Daniel S. Spellman, and Kevin P. Bateman

Journal Citation: *Bioanalysis* **2019**, 11(3), 203–213

Key words: SAW-5, Affinity Purification, In-Solution Digestion, On-Cartridge Reaction, Biopharma, Pharmacokinetics, Immunocapture

2018

Assessment of susceptible chemical modification sites of trastuzumab and endogenous human immunoglobulins at physiological conditions

Authors: Ingrid Schmid, Lea Bonnington, Monika Gerl, Katrin Bomans, Anna Louisa Thaller, Katharina Wagner, Tilman Schlothauer, Roberto Falkenstein, Boris Zimmermann, Jugen Kopitz, Max Hasmann, Frieder Bauss, Markus Habberger, Dietmar Reusch, and Patrick Bulau

Journal Citation: *Communications Biology* **2018**, 1, 28

Key words: PAW-5, Affinity Purification, Biopharma, Pharmacokinetics

Quantitation of a Therapeutic Antibody in Serum Using Intact Sequential Affinity Capture, Trypsin Digestion and LC-MS/MS

Authors: Lisa A. Vasicek, Daniel S. Spellman, SuChun Hseih, Wolfgang Seghezzi, Shuli Zhang, Michael Santostefano, and Kevin P. Bateman

Journal Citation: *Analytical Chemistry* **2018**, 90(1), 866–871

Key words: PAW-5, SAW-5, Affinity Purification, In-Solution Digestion, Biopharma, Pharmacokinetics, Immunocapture

2017

A multiplexed immunocapture liquid chromatography tandem mass spectrometry assay for the simultaneous measurement of myostatin and GDF-11 in rat serum using an automated sample preparation platform

Authors: Yue Zhao, Guowen Liu, Frank C. Zambito, Yan J. Zhang, Binodh S. DeSilva, Alexander T. Kozhich, and Jim X. Shen

Journal Citation: *Analytica Chimica Acta* **2017**, 979, 36–44

Key words: SAW-5, Affinity Purification, Biopharma, Pharmacokinetics, Immunocapture

2016

Antibody-drug conjugate bioanalysis using LB-LC-MS/MS hybrid assays: strategies, methodology and correlation to ligand-binding assays

Authors: Jian Wang, Huidong Gu, Ang Liu, Alexander Kovhich, Vangipuram Rangan, Heather Myler, Linlin Luo, Richard Wong, Huadong Sun, Bonnie Wang, Heather E. Vezina, Shrikant Deshpande, Yan Zhang, Zheng Yang, Timothy Olah, Anne-Francoise Aubry, Mark Arnold, Renuka Pillutla, and Binodh DeSilva

Journal Citation: *Bioanalysis* **2016**, 8(13), 1383–1401

Key words: PAW-5, PGW, SAW-5, Affinity Purification, Antibody Drug Conjugates, Biopharma, Pharmacokinetics, Immunocapture

Automated DBS microsampling, microscale automation and microflow LC-MS for therapeutic protein PK

Authors: Qian Zhang, Daniela Tomazela, Lisa A. Vasicek, Daniel S. Spellman, Maribel Beaumont, BaoJen Shyong, Jacqueline Kenny, Scott Fauty, Kerry Fillgrove, Jan Harrelson, and Kevin P. Bateman

Journal Citation: *Bioanalysis* **2016**, 8(7), 649–659

Key words: PAW-5, Affinity Purification, In-Solution Digestion, Biopharma, Pharmacokinetics

Discovery of Pyrophosphate Diesters as Tunable, Soluble and Bioorthogonal Linkers for Site-Specific Antibody-Drug Conjugates

Authors: Jeffrey C. Kern, Mark Cancilla, Deborah Dooney, Kristen Kwasnjuk, Rena Zhang, Maribel Beaumont, Isabel Figueroa, SuChun Hsieh, Linda Liang, Daniela Tomazela, Jeffrey Zhang, Philip E. Brandish, Anthony Palmieri, Peter Stivers, Mangeng Cheng, Guo Feng, Prasanthi Geda, Sanjiv Shah, Andrew Beck, Damien Bresson, Juhi Firdos, Dennis Gately, Nick Knudsen, Anthony Manibusan, Peter G. Schultz, Ying Sun, and Robert M. Garbaccio

Journal Citation: *Journal of the American Chemical Society* **2016**, 138(4), 1430–1445

Key words: SAW-5, Affinity Purification, Antibody Drug Conjugates, Biopharma, Pharmacokinetics, Immunocapture

2015

An integrated multiplatform bioanalytical strategy for antibody–drug conjugates: a novel case study

Authors: Heather Myler, Vangipuram S. Rangan, Jian Wang, Alexander Kozhich, Jennifer A. Cummings, Robert Neely, Donna Dail, Ang Liu, Bonnie Wang, Heather E. Vezina, Wendy Freebern, Mei-Chen Sung, David Passmore, Shrikant Deshpande, Thomas Kempe, Huidong Gu, Mark Saewert, Amy Manney, John Lute, Frank Zambito, Richard L. Wong, Steven P. Piccoli, Anne-Françoise Aubry, Renuka Pillutla, Mark Arnold, and Binodh DeSilva

Journal Citation: *Bioanalysis* **2015**, 7(13), 1569–1582

Key words: SAW-5, Affinity Purification, Antibody Drug Conjugates, Biopharma, Pharmacokinetics, Immunocapture

Quantitative bioanalysis of antibody-conjugated payload in monkey plasma using a hybrid immuno-capture LC-MS/MS approach: Assay development, validation, and a case study

Authors: Ang Liu, Alexander Kozhich, David Passmore, Huidong Gu, Richard Wong, Frank Zambito, Vangipuram S. Rangan, Heather Myler, Anne-Francoise Aubry, Mark E. Arnold, and Jian Wang

Journal Citation: *Journal of Chromatography B* **2015**, 1002, 54–62

Key words: SAW-5, Affinity Purification, Antibody Drug Conjugates, Biopharma, Pharmacokinetics, Immunocapture

2014

Targeting an acid labile aspartyl–prolyl amide bond as a viable alternative to trypsin digestion to generate a surrogate peptide for LC–MS/MS analysis

Authors: Eliza N. Fung, Frank Zambito, Jonathan Haulenbeek, Steven P. Piccoli, Yan Zhang, Binodh DeSilva, Mark Arnold, and Alexander Kozhich

Journal Citation: *Bioanalysis* **2014**, 6(22), 2985–2998

Key words: SAW-5, Affinity Purification, Biopharma, Pharmacokinetics, Immunocapture

AssayMAP Bravo Application notes

2024

Drug to Antibody Ratio Analysis of Brentuximab Vedotin in Monkey Plasma Antibody drug conjugate analysis under native conditions using Agilent AdvanceBio 6545XT LC/Q-TOF systems

Authors: Xi Qiu, Kenda L.J. Evans, Andrea Ngai, and Muhammed Naqvi

Key words: PAW-5, Affinity Purification, Antibody Drug Conjugates, Biopharma, Pharmacokinetics, Immunocapture

2023

Assessing Protein and Payload Stability of Antibody Drug Conjugate Brentuximab Vedotin in Monkey Plasma Using Agilent AssayMAP Brvo and Agilent 6495 Triple Quadrupole LC/MS Systems

Authors: Xi Qiu, Kenda L.J. Evans, Andrea Ngai, and Muhammed Naqvi

Key words: PAW-5, SAW-5, Affinity Purification, In-Solution Digestion, On-Cartridge Reaction, Antibody Drug Conjugates, Biopharma, Pharmacokinetics, Immunocapture

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