



KNOWLEDGE CENTER:

Publications and References Citing Solentim Technologies & Solutions

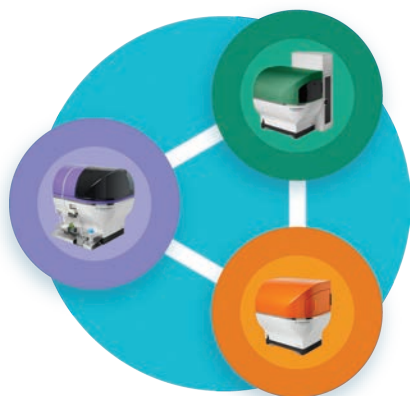
At Nova Biomedical, we partner with organizations advancing the future of biotherapeutic development.

For more than a decade, Solentim technologies and reagents from Nova Biomedical have been used across biotechnology and biopharmaceutical organizations to support advanced cell line development workflows. These applications include gene-edited cell engineering and processes where robust single-cell assurance and confident clone selection are essential.

This document compiles peer-reviewed publications, patent applications, and scientific references that cite the use of Solentim instruments and reagents. Together, these works illustrate how biotechnology and biopharma teams have applied Solentim solutions to support evidence of clonality, improve process consistency, and generate high-quality cell lines suitable for downstream development and biomanufacturing.

The purpose of this document is to provide a consolidated, evidence-based reference demonstrating how Solentim technologies have been applied in real-world scientific and development workflows.

Publications relating to Solentim instrumentation are presented first, followed by those relating to the reagent portfolio. Peer-reviewed journal articles and patent applications are clearly separated to provide a structured, easily navigable resource for readers seeking supporting scientific evidence.



VIPS® Technology

The VIPS technology deposits a nanodroplet of a cell suspension in an empty well, followed by high-resolution multi-plane imaging to determine the presence of a single cell prior to automated media deposition. The table outlines the peer-reviewed publications or scientific presentations that cite the use of either the VIPS or VIPS PRO.



Year	Author Affiliation	Title	Journal
2025	Hainan Medical University	Advances in Induced Pluripotent Stem Cell Reprogramming and Its Application in Amyotrophic Lateral Sclerosis: A Review	FASEB BioAdvances
2025	National Institute of Health	Multi-attribute monitoring (MAM) methodology for glycosylated subunit vaccines	Scientific Reports
2025	Resilience	Assessing the probability of clonality achieved by single-cell cloning of CHO cells through cell deposition combined with imaging using distinguishable cells	Biotechnology Progress
2025	Voyager Therapeutics	Assessment of Two HEK293 Cell Line Cloning Strategies to Improve AAV Yield	ASGCT 28th Annual Meeting
2024	Andelyn Biosciences	Strategy for Derivation and Optimization of a Clonal HEK293 Suspension Cell Line for High Yield AAV Production	BioPharm International
2024	Ascend Advanced Therapies	Transcriptomics-informed pharmacology identifies epigenetic and cell cycle regulators as enhancers of AAV production	Molecular Therapy Advanced
2022	Hengenix Biotech	An innovative platform to improve asymmetric bispecific antibody assembly, purity, and expression level in stable pool and cell line development	Biochemical Engineering Journal
2021		The Next Generation of Cell Factories for Viral Vector Production	Genetic Engineering & Biotechnology News
2021	ATUM	Accelerating and derisking CMC development with transposon derived manufacturing cell lines	Biotechnology & Bioengineering

In addition to scientific reports, our technologies have also been trusted within our customers' patented methods. The table outlines the publicly available patents that cite the use of either the VIPS or VIPS PRO.

Year	Inventor Affiliation	Title	Reference
2025	AdaptImmune	Production Of Immune Cells	WO2025125443
2025	Ascend Advanced Therapies	Method For Producing Recombinant Adeno-Associated Virus Particles	WO2025087695
2024	AdaptImmune	Modification Of Cells With Heterologous T-Cell Receptor (TCR) Coding Sequences	WO2023012478
2024	Jushi Biopharmaceutical	Establishment and culture method of serum-free suspension domestication CHO-K1 monoclonal cell strain	CN118440883
2024	Shattuck Labs	Engineered cell lines and uses thereof	WO2024178239
2022	Gedeon Richter	Mutated recombinant ACE2-Fc fusion proteins for the treatment of COVID-19 infections	WO2022167947

Cell Metric® Technology

The Cell Metric technology generate high-resolution, whole well-imaging for the purpose of providing Evidence of Clonality and outgrowth quantification in single cell cloning workflows. The table outlines the peer-reviewed publications or scientific presentations that cite the use of either the Cell Metric or Cell Metric X families.



Year	Author Affiliation	Title	Journal
2025	CSL Innovation	Enhancing lentiviral production for WAS gene therapy: a comparative analysis of stable producer cell lines evaluating flatware system and adherent bioreactors in perfusion mode	Frontiers in Bioengineering and Biotechnology
2025	Fred Hutchinson Cancer Center	GMP Manufacturing and Characterization of the HIV Booster Immunogen HxB2.WT.Core-C4b for Germline Targeting Vaccine Strategies	Vaccines
2025	Hainan Medical University	Advances in Induced Pluripotent Stem Cell Reprogramming and Its Application in Amyotrophic Lateral Sclerosis: A Review	FASEB BioAdvances
2025	Resilience	Assessing the probability of clonality achieved by single-cell cloning of CHO cells through cell deposition combined with imaging using distinguishable cells	Biotechnology Progress
2025	Sartorius	Utilizing Stable Gene-Edited Knockout Pools for Genetic Screening and Engineering in Chinese Hamster Ovary Cells	Biotechnology Journal
2025	Wuhan University	Performance Evaluation of a HBsAg-Specific Anti-HBsAg Monoclonal Antibody	Biomedicines
2025	Wuxi Biologics	Do-it-yourself instrument integration into an existing mammalian cell line development automation platform.	SLAS Technology
2024	Alligator Bioscience	RUBY® – a tetravalent (2+2) bispecific antibody format with excellent functionality and IgG-like stability, pharmacology and developability properties	mAbs
2023	MilliPore Sigma	Chemical and Genetic Modulation of Complex I of the Electron Transport Chain Enhances the Biotherapeutic Protein Production Capacity of CHO Cells	Cells
2023	Merck	Mammalian display to secretion switchable libraries for antibody preselection and high throughput functional screening	mAbs
2022	Fujifilm	Coupling picodroplet microfluidics with plate imaging for the rapid creation of biomanufacturing suitable cell lines with high probability and improved multi-step assurance of monoclonality	Biotechnology Journal
2022	Hengenix Biotech	An innovative platform to improve asymmetric bispecific antibody assembly, purity, and expression level in stable pool and cell line development	Biochemical Engineering Journal
2021	Amgen	Microfluidic chip - based single - cell cloning to accelerate biologic production timelines	Biotechnology Progress
2021	ATUM	Accelerating and de - risking CMC development with transposon - derived manufacturing cell lines	Biotechnology & Bioengineering
2021	Dokuz Eylul University	AXL Knock-Out in SNU475 Hepatocellular Carcinoma Cells Provides Evidence for Lethal Effect Associated with G2 Arrest and Polyploidization	International Journal of Molecular Sciences
2021	Oxgene	Development of a novel mammalian display system for selection of antibodies against membrane proteins	Journal of Biological Chemistry
2019	Amgen	Assuring Clonality on the Beacon Digital Cell Line Development Platform	Biotechnology Journal
2019	GSK	Integration of high-throughput analytics and cell imaging enables direct early productivity and product quality assessment during Chinese Hamster ovary cell line development for a complex multi-subunit vaccine antigen	Biotechnology Progress
2018	PanGen Biotech	Efficient Development of Stable Recombinant Chinese Hamster Ovary (rCHO) Cell Lines to Produce Antibodies by Using Dimethyl Sulfoxide (DMSO) in Electroporation	Biotechnology & Bioengineering

Cell Metric® Technology

In addition to scientific reports, our technologies have also been trusted within our customers' patented methods. The table outlines the publicly available patents that cite the use of either the Cell Metric or Cell Metric X families.



Year	Inventor Affiliation	Title	Reference
2026	Regencor	Follistatin-like 1 (FSTL1) for repairing cardiac tissue	WO2026006798
2025	AGC Biologics	Bidirectional CHEF1 vectors	WO2019139940
2025	AstraZeneca	Combination therapies for the treatment of cancer	WO2024100236
2025	Cevec Pharmaceuticals	Improved cell lines and methods for the production of adeno-associated vectors	WO2023166026
2024	AdaptImmune	Modification of cells with heterologous T-Cell Receptor (TCR) coding sequences	WO2023012478
2024	Amgen	Method for producing an antibody peptide conjugate	WO2022US79479
2025	China Resources Biomedical	Method for screening and amplifying monoclonal cell strain	CN119709630
2024	Chugai Pharmaceutical	Target cell-specific cytoplasm invasion antigen-binding molecule	WO2020022262
2024	Chugai Pharmaceutical	Antigen-binding molecules with improved cytosol-penetrating activity	WO2022138692
2024	Novel Pharma	Pharmaceutical composition for treating, preventing or ameliorating GM1 Gangliosidosis or Morquio Syndrome B and administration method thereof	US2024132865
2024	Sartorius	CHO cells with optimized ECM profile	WO2024200858
2024	Uniqure Biopharma	Methods for producing single insect cell clones	WO2022207899
2022	Radimmune Therapeutics	Melanin antibodies and uses thereof	WO2019055706
2021	Biomarin	Hydrophobic peptide salts for extended release compositions	WO2021030411
2018	Chitose	Cell reparation method	JP20170046597

The Solentim Cell metric has become a crucial instrument in our cell line development process. The instrument has allowed us to create reliable and consistent data which in turn results in us being able to track our cell lines and compare them to each other with ease. Images produced by this instrument are always of high quality, and it is easy to train new member of the team on this platform as the system is very user-friendly!

The instrument is certainly worth the money we paid as it has allowed us to determine monoclonality and track colony growth

Emily Agro
Ultragenyx Pharmaceuticals

Insti Cell Growth Supplements

The Insti portfolio of cell growth supplements are animal component free (ACF) - with certain product also being fully chemically-defined (CD) - reagents designed for optimizing single cell outgrowth, scale-up and master cell bank efficiencies of CHO and HEK cell lines. The table outlines the peer-reviewed publications or scientific presentations that cite the use of either the InstiGRO, InstiSHAKE or InstiTHAW reagents.



Year	Author Affiliation	Title	Journal
2025	CSL Innovation	Enhancing lentiviral production for WAS gene therapy: a comparative analysis of stable producer cell lines evaluating flatware system and adherent bioreactors in perfusion mode	Frontiers in Bioengineering and Biotechnology
2025	Novo Nordisk Foundation Center for Biosustainability	Targeted UDP-glucose ceramide glucosyltransferase stable overexpression induces a metabolic switch improving cell performance at high cell density	Frontiers in Bioengineering and Biotechnology
2024	University of Twente	A nanowell platform to identify, sort and expand high antibody-producing cells	Scientific Reports
2022	Hengenix Biotech	An innovative platform to improve asymmetric bispecific antibody assembly, purity, and expression level in stable pool and cell line development	Biochemical Engineering Journal
2022	Immatics Biotechnologies	Mammalian Display Platform for the Maturation of Bispecific TCR-Based Molecules	Antibodies
2020	Austrian Centre Biotechnology	Random epigenetic modulation of CHO cells by repeated knockdown of DNA methyltransferases increases population diversity and enables sorting of cells with higher production capacities	Biotechnology and Bioengineering

In addition to scientific reports, our technologies have also been trusted within our customers' patented methods. The table outlines the publicly available patents that cite the use of either the InstiGRO, InstiSHAKE or InstiTHAW reagents.

Year	Inventor Affiliation	Title	Reference
2025	CSL Behring	Cell Lines Overexpressing Vesicular Stomatitis Virus G	WO2025219924
2025	Danmarks Tekniske Universitet	Glycoengineered extracellular vesicles, methods of production and uses thereof	WO2025093745
2025	Enduro Genetics	Mammalian cell lines addicted to a transcriptional state of high heterologous protein secretion	WO2025248112
2025	Huayuan Shanghai Biopharmaceutical	Human embryo kidney monoclonal cell strain and application thereof in packaging recombinant adeno-associated virus	CN119614483
2025	Immatics Biotechnologies	Mammalian display platform for multispecific antigen binding proteins	WO2023209124
2024	Affimed Therapeutics	Bispecific CD16A binders	WO2023079493
2024	CHO PLUS	High production of recombinant protein by making cell hybrids and enriching for a preferred mitochondrial phenotype	WO2025128096
2024	Sanofi	Host cell lines and methods for identifying and using such host cell lines	WO202424361



To learn more or request a quote, visit: www.novabiomedical.com
 Nova Biomedical | 200 Prospect Street | Waltham, MA 02454 USA

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