StemFit™ For Differentiation

Published Application Examples

StemFit™ For Differentiation (AS401)has been evaluated acrossmultiple cell types and differentiation workflows. The publications listed below include peer-reviewed articles and conference papers that document its use. We hope this supports your assessment and exploration of potential applications.

★HPC Differentiation

Animal-Origin FreeMediumfor hPSC Derived CD8 SP-TCell Generation. (2025). *Cytotherapy.*
https://www.sciencedirect.com/science/article/abs/pii/S1465324925005705

★Melanocyte Differentiation

Efficientandcost-effectivedifferentiationofinducedneuralcrestcells from induced pluripotent stem cellsusinglaminin-211. (2024). *Cell Reports Methods.*
https://www.sciencedirect.com/science/article/pii/S2352320424001615

★Hepatocyte / Liver Organoid Differentiation

Generation of human induced pluripotent stem cell-derived liver buds with chemically defined and animalorigin-free media. (2020). *Scientific Reports.*
https://www.nature.com/articles/s41598-020-73908-1
※AS401 was used in combination with RPMI-1640. The paper indicates that AS401 can serve as an alternative to B-27 and highlights its Animal-Origin-Free properties. *Listed as “AS400” in the publication.*

Protocol for generating liver organoids containing Kupffer cells using human iPSCs. (2025). *STAR Protocols.*
https://www.sciencedirect.com/science/article/pii/S2666166725005441
※The paper provides clear step-by-step instructions for media preparation and culture conditions across each stage of the differentiation workflow. AS401 is specifically used during the Definitive Endoderm (DE) differentiation step.

OptimizingcellmigrationassaysCriticalrolesoffluorescentlabeling and chemoattractant gradients. (2024). *Biochimica et Biophysica Acta – General Subjects.*
https://www.sciencedirect.com/science/article/pii/S0006291X24015341

StabilizedgenerationofhumaniPSC-derivedliverorganoidsusing a modified coating approach. (2022). *Biomethods.*
https://academic.oup.com/biomethods/article/8/1/bpac034/6887131

Human iPSC–liver organoid transplantation reduces fibrosis through immunomodulation. (2024). *Science Translational Medicine.*
https://www.science.org/doi/abs/10.1126/scitranslmed.adg0338

Hightemporalresolutionproteomeandphosphoproteomeprofiling of stem cell-derived hepatocyte development. (2022). *Cell Reports.*
https://www.cell.com/cell-reports/fulltext/S2211-1247(22)00352-7

Incorporation of humaniPSC-derivedstromalcellscreatesapancreatic cancer organoid with heterogeneous cancer-associatedfibroblasts. (2023). *CellReports.*
https://www.cell.com/cell-reports/fulltext/S2211-1247(23)01432-8

★iSTC Differentiation

Self-organized yolksac-likeorganoids allow scalable generation of multipotent hematopoietic progenitor cells from induced pluripotent stem cells. (2023). *Cell Reports Methods.*
https://www.cell.com/cell-reports-methods/fulltext/S2667-2375(23)00079-6
※ AS401 is Mixed with DMEM/F12.

★HE Differentiation

Hypoimmunogenichuman iPSCs expressing HLA-G, PD-L1, and PD-L2 evade innate and adaptive immunity. (2024). *Stem Cell Research & Therapy.*
https://link.springer.com/article/10.1186/s13287-024-03810-4

BLOC: buildable and linkable organ-on-a-chip. (2024). *bioRxivPreprint.*
https://www.biorxiv.org/content/10.1101/2024.10.29.620775v1.full.pdf

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★Cryopreservation / Serum-Free Media

Microplate-basedcryopreservationofadherent-cultured human cell lines using amino acids and proteins. (2024). *ACS Biomaterials Science & Engineering.*
https://pubs.acs.org/doi/abs/10.1021/acsbiomaterials.3c01834
※ Demonstrates AS401 as an FBS replacement while maintaining cryoprotection.

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