



ART Culture Media for Every Preference

Quality products from
ORIGIO, SAGE
and **LifeGlobal**



ORIGIO • SAGE • Humagen • TPC • K-Systems • RI • Wallace • LifeGlobal • CooperGenomics



CooperSurgical offers high-quality culture media for every protocol

CooperSurgical Fertility and Genomic Solutions is the market leader in ART media with strong heritage provided by ORIGIO, SAGE and LifeGlobal

We bring these three well-established brands together under the unifying principle philosophy of our culture portfolio, which is to support you in maximizing success rates in your clinic by developing and manufacturing ART media of the highest quality.

Quality you can rely on

Our certified, state-of-the-art production facilities follow the highest quality and regulatory standards to ensure consistent quality and low batch-to-batch variation. We listen to customer insights and work closely with industry experts around the world to ensure that our media can support your preferred protocol, whatever that may be.

An unrivaled culture media portfolio

CooperSurgical provides media for every step of the ART journey, including oocyte retrieval, andrology, fertilization, embryo culture and biopsy, and cryopreservation. Our diverse range of media gives us a unique position that allows us to meet any individual need or preference.

Benefiting from the strength of our three brands we are able to offer embryo culture media for both continuous and sequential systems, with options available for various protein preferences. No matter which brand you choose, you can trust that our media have been specifically designed to support optimal development of healthy embryos.



The integral role of culture media in ART



The primary role of a culture system is to provide an environment that minimizes insults and stresses to gametes and embryos *in vitro*. By delivering a balance of ions, energy substrates and nutrients, media are essential in optimizing clinical outcomes in the ART lab.

Culture systems are highly sensitive to the external environment and influenced by many factors, including air quality, temperature control, CO₂ and pH levels, as well as the laboratory staff's level of expertise. As variations in any of these parameters can affect clinical outcomes, creating and maintaining the optimal environment is key to a well-functioning culture system.

Partnering beyond products

We collaborate with clinics and experts worldwide to create a global network of scientific leaders, embryologists and clinical training experts. By partnering with us you become part of this network, and benefit from the knowledge, training and product solutions our leading specialists are able to provide.

Our team of experienced embryologists assists customers with the establishment of clinics (turn-key projects), laboratory design, and clinic audits to optimize lab performance. In addition, they give lectures, run seminars and workshops, and support the research and development of new products.

See our
website for
information
on training

Working together, we can advance your clinical workflow and productivity, helping you improve outcomes.

Clinical Application Specialists

Our new clinical application service allows you to partner with experts from the CooperSurgical Medical Affairs team. As Reproductive Science Specialists, our expert team can support with:

- Lab audits
- pH testing
- Setting up media evaluations
- Troubleshooting
- Advice on laboratory design
- And much more

All with the aim of improving your success rates.

Collection & manipulation media

Oocyte retrieval and handling media from CooperSurgical are designed to be pH stable and provide optimal physical and chemical conditions for human gametes and embryos during *in vitro* ART procedures taking place outside the CO₂ incubator.

In order to work with different culture media suites, and minimize osmolality and pH shifts, CooperSurgical offers a range of HEPES buffered oocyte retrieval and handling media. Our media range has multiple protein options.





Protein Options

● Protein Free

● HSA 5 mg/ml

● SAGE Quinn's Advantage™ w/HEPES

● ORIGIO Flushing Medium

● SynVibro® Flush



Fertilization media



Fertilization media from CooperSurgical can be used for conventional *in vitro* fertilization or ICSI, and are designed to support both gametes during fertilization, as well as promote sperm function.

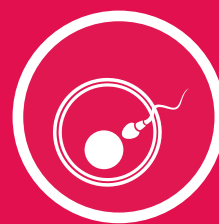
Each media shares a base formulation with the equivalent culture media series to minimize stress and support optimal fertilization. Our media range has multiple protein options.

● SAGE Quinn's Advantage™ Fertilization

● ORIGIO® Sequential Fert™

● SAGE Quinn's Advantage™ Protein Plus Fertilization





Protein Options

- Protein Free
- HSA 3 mg/ml
- HSA 5 mg/ml

● global® total® LP for Fertilization

global® for Fertilization ●



Culture media



Single-step embryo culture media

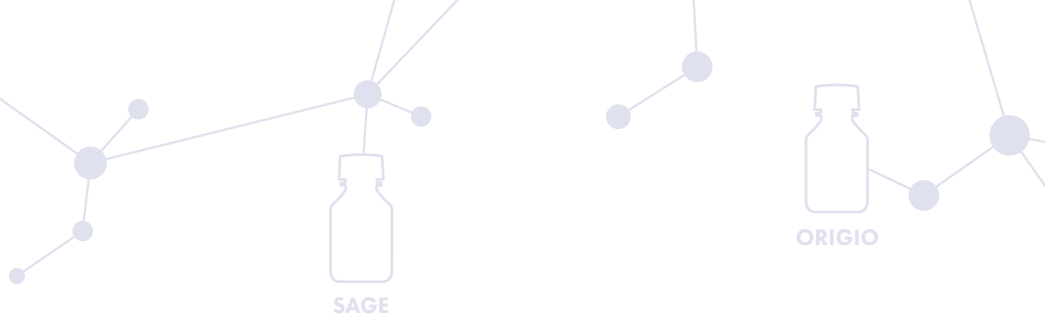
Single-step media are designed to provide the embryo with the nutrients needed for uninterrupted culture right through to the blastocyst stage. Evidence suggests that single-step media is equal to sequential media in its ability to support embryogenesis.¹⁻³

Our unrivaled culture media range includes global[®], the original single-step, protein-free medium from the LifeGlobal brand. With performance demonstrated through 15 years of use and several independent publications, it is used as the base for all our LifeGlobal ready-to-use culture media.

We also offer SAGE 1-Step[™], a ready-to-use culture medium containing hyaluronan (HA) in addition to HSA. The addition of HA has been shown to promote embryo development and cryo survival⁴ as well as increase implantation and clinical pregnancy rates.⁴⁻⁶



1. Summers MC, et al. Human preimplantation embryo development in vitro: a morphological assessment of sibling zygotes cultured in a single medium or in sequential media. Human Fertility. 2013;16:278-285
2. Hardarson T, et al. Noninferiority, randomized, controlled trial comparing embryo development using media developed for sequential or undisturbed culture in a time-lapse setup. Fertil Steril. 2015;104:1452-1459
3. Dieamant F, et al. Single versus sequential culture medium: which is better at improving ongoing pregnancy rates? A systematic review and meta-analysis. JBRA Assist Reprod. 2017;21:240-246



Sequential embryo culture media

Our sequential media systems use stage-specific formulations that aim to mimic the environment an embryo would encounter *in vivo* and support the changing metabolic and physiological needs at each phase.

Developed and inspired by peer-reviewed research, the ORIGIO® Sequential Series is formulated with differing concentrations of vitamins and amino acids to optimize cellular function and reduce embryonic stress. Hyaluronan is also included to promote embryo development and cryo survivability⁴ and improve implantation and clinical pregnancy rates.⁴⁻⁶

Our culture media range has multiple protein options.

Protein Options

- Protein Free
- HSA 5 mg/ml

SAGE Quinn's Advantage™ Sequential Series

ORIGIO® Sequential Series



4. Lane M, Gardner D. Embryo culture medium: which is the best? Best Res Clin Obstet Gyn. 2007;21:83-100.

5. Urban B, et al. Effect of hyaluronan-enriched transfer medium on implantation and pregnancy rates after day 3 and day 5 embryo transfers: a prospective randomized study. Fertil Steril. 2008;90:604-612.

6. Bontekoe S, Johnson N, Blake D. Adherence compounds in embryo transfer media for assisted reproductive technologies. Cochrane Database of Systematic Reviews. 2014;2:Art. No.: CD007421.

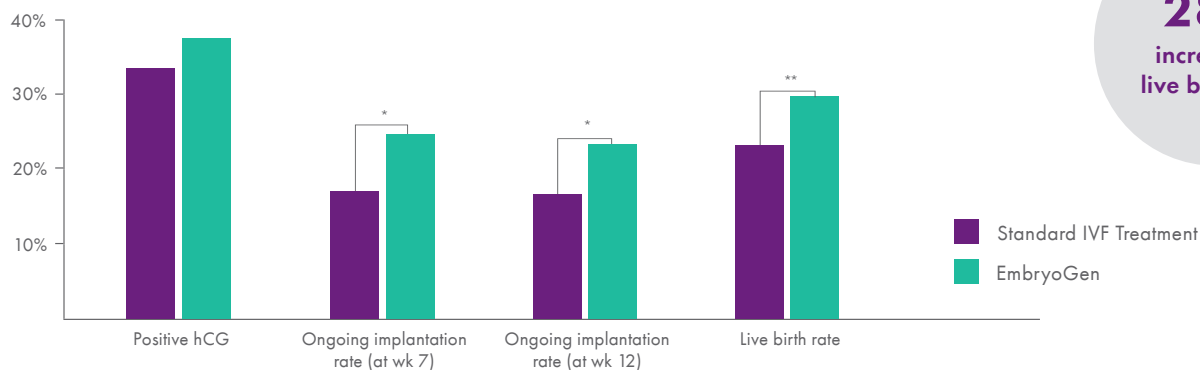
Culture media with GM-CSF



EmbryoGen[®] and BlastGen[™] make up our novel culture media suite supplemented with the recombinant human cytokine granulocyte-macrophage colony-stimulating factor (GM-CSF). The inclusion of this cytokine aims to reduce embryonic stress by creating a more physiological *in vitro* environment, increasing the chances of a successful implantation.

Studies have shown that culturing embryos in media containing GM-CSF improves implantation, pregnancy and live birth rates.^{1,2}

3 days of embryo culture in EmbryoGen improved live birth rate¹

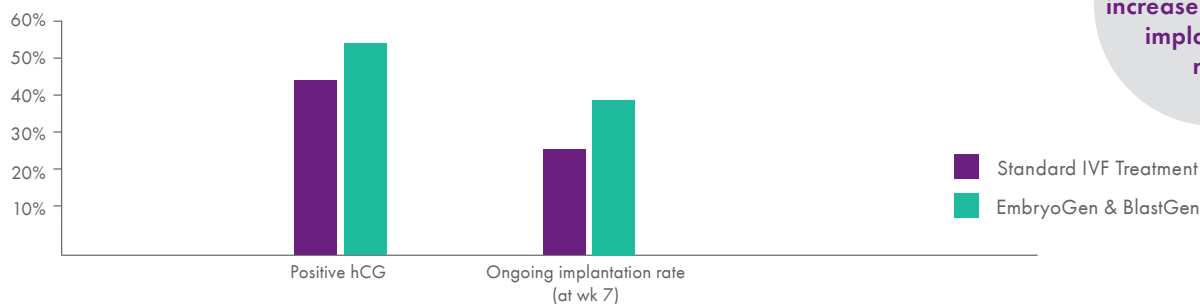


28%
increase in
live birth rate

Subgroup analysis for previous miscarriage patients (n=289 embryo transfer cycles) from a multi-center, randomized, controlled parallel group, double blinded trial with 1,300+ patients from 14 centers. *P<0.01; **P<0.05

Today early data on the clinical use of the full GM-CSF media suite, EmbryoGen and BlastGen, demonstrates that culturing in GM-CSF containing media until the blastocyst stage increases pregnancy and implantation rates.²

EmbryoGen and BlastGen have a positive effect on pregnancy rate and increase the chances of obtaining a live birth²



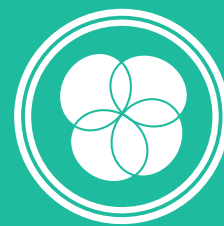
44%
increase in ongoing
implantation
rate

Subgroup analysis for frozen-thawed blastocysts (n=93 single blastocyst transfer cycles) from a single-center, pilot study of randomized sibling zygotes.

Definitions

Ongoing implantation rate: Number of sacs with heart beat per transferred embryo. Live birth rate: Live births per transferred embryo.

1. Ziebe S, et al. A randomized clinical trial to evaluate the effect of granulocyte-macrophage colony-stimulating factor (GM-CSF) in embryo culture medium for *in vitro*. Fertil Steril. 2013;99:1600-1609
2. CooperSurgical, data on file
3. Zhao Y & Chegini N. Human fallopian tube expresses granulocyte-macrophage colony stimulating factor (GM-CSF) and GM-CSF alpha and beta receptors and contain immunoreactive GM-CSF protein. J Clin Endocrinol Metab 1994;79:662-665
4. Giacomini G, et al. Epithelial cells are the major source of biologically active granulocyte macrophage colony-stimulating factor in human endometrium. Hum Reprod. 1995;10:3259-3263
5. Zhao Y & Chegini M. The expression of granulocyte macrophage-colony stimulating factor (GM-CSF) and receptors in human endometrium. 1999;42:303-311



Create a more physiological culture environment

GM-CSF is naturally produced and secreted from the human oviductal and endometrial epithelium^{3,4} with levels peaking during the secretory phase of the menstrual cycle.^{4,5} This coincides with the time of conception and implantation.

- GM-CSF reduces embryonic stress and facilitates communication between embryo and endometrium⁶
- A significant positive correlation between clinical pregnancy rate and the level of GM-CSF secreted by the endometrial cells has been shown in patients with recurrent implantation failure (RIF)⁷
- Culturing embryos in GM-CSF has been shown to improve ongoing implantation and live birth rates for patients with a history of miscarriage and recurrent implantation failure^{1,8}

Our unique sequential culture media suite, EmbryoGen and BlastGen, contains GM-CSF to help improve IVF outcomes for poor prognosis patients.

Protein Options

● HSA 5 mg/ml



6. Chin PY, et al. Stress response genes are suppressed in mouse preimplantation embryos by granulocyte-macrophage colony-stimulating factor (GM-CSF). Human Reproduction. 2009;24:2997–3009
7. Spandorfer SD, et al. Granulocyte macrophage-colony stimulating factor production by autologous endometrial co-culture is associated with outcome for in vitro fertilization patients with a history of multiple implantation failures. Am J Reprod Immunol. 1998;40:377-381
8. Tevkin S, et al. The frequency of clinical pregnancy and implantation rate after cultivation of embryos in a medium with granulocyte macrophage colony-stimulating factor (GM-CSF) in patients with preceding failed attempts of ART. Gynecol Endocrinol. 2014;30(suppl 1):9-12

Train with us

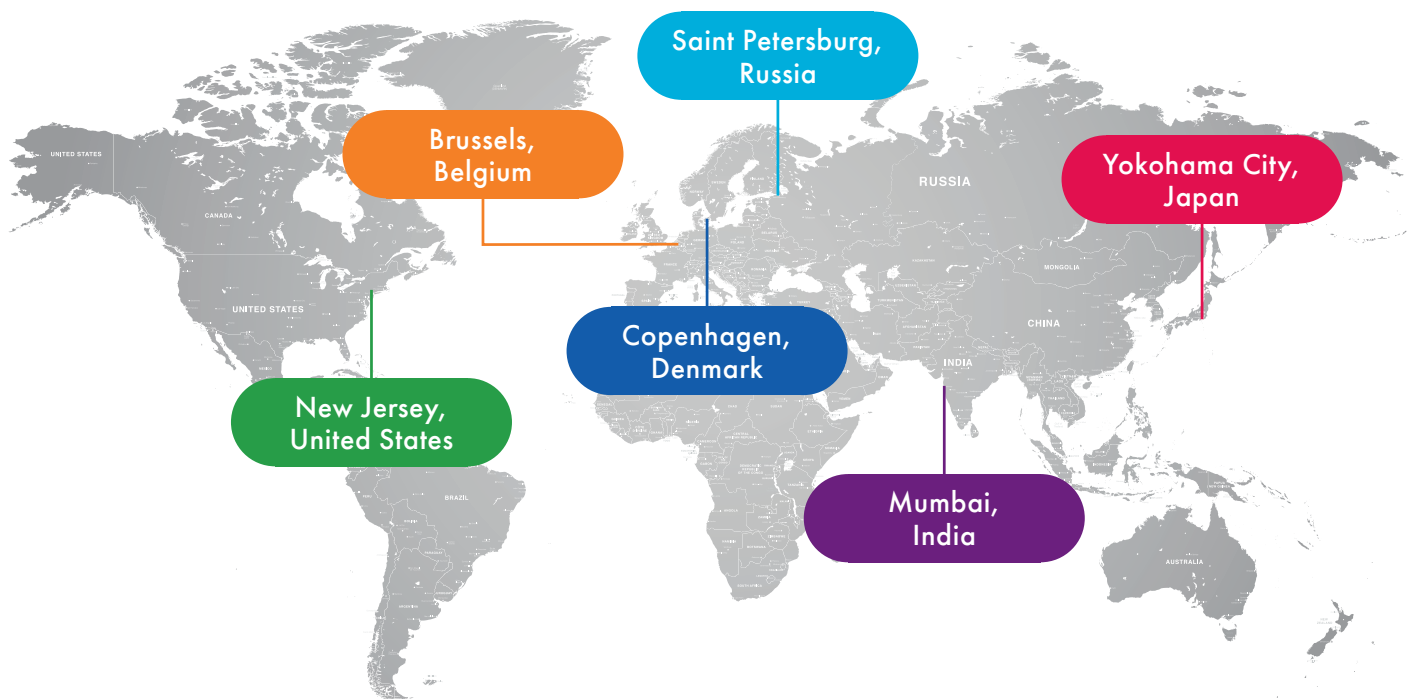
Training program

CooperSurgical Fertility and Genomic Solutions provides global hands-on training courses for a comprehensive range of Genomic and Assisted Reproductive Technologies.

All of our training centers are fully equipped to support expert tuition, laboratory demonstrations, peer-to-peer discussions, and the sharing of best practice in a professional yet relaxed atmosphere. Our courses focus on providing evidence-based training by skilled, experienced embryologists in specific topics such as embryo culture, vitrification, sperm selection, biopsy and genetic testing.

If you or your staff could benefit from training, see our website fertility.coopersurgical.com/training-lab for more information, course schedule and bookings.

Training course locations



Workshops

As well as our training lab courses we also run regular hands-on workshops around the globe. To find out about events coming up in your region, contact your local CooperSurgical representative.

Product code overview

Collection & Manipulation	Description			(ml)	Product Code	
ORIGIO Flushing Medium	HEPES	●	●	125	10760125	26 W
ORIGIO Flushing Medium	HEPES	●	●	300	10765060	
ORIGIO Flushing Medium	HEPES	●	●	125	10840125	
ORIGIO Flushing Medium	HEPES	●	●	300	10845060	
SynVibro® Flush	HEPES	●	✕	125	15760125	
SynVibro® Flush	HEPES	●	✕	125	15840125	
Quinn's Advantage Medium w/ HEPES	HEPES	●	●	100	ART-1023	52 W
Quinn's Advantage Medium w/ HEPES	HEPES	●	●	500	ART-1024	
global® Collect®	HEPES	●	●	100	GCOL-100	10 W
global® Collect®	HEPES	●	●	500	GCOL-500	
global® w/ HEPES	HEPES	●	●	50	LGGH-050	
global® w/ HEPES	HEPES	●	●	100	LGGH-100	
global® w/ HEPES	HEPES	●	●	250	LGGH-250	
global® w/ HEPES	HEPES	●	●	500	LGGH-500	
global® total® LP w/ HEPES	HEPES	●	●	20	H5TH-020	
global® total® LP w/ HEPES	HEPES	●	●	50	H5TH-050	
global® total® LP w/ HEPES	HEPES	●	●	100	H5TH-100	
global® total® LP w/ HEPES	HEPES	●	●	250	H5TH-250	
global® total® w/ HEPES w/ HSA	HEPES	●	●	50	HGTH-050	
global® total® w/ HEPES w/ HSA	HEPES	●	●	100	HGTH-100	
global® total® w/ HEPES w/ HSA	HEPES	●	●	250	HGTH-250	

Protein Supplement	(ml)	Product Code	
Human Albumin	60	ART-3001	52 W
Human Albumin	100	ART-3003	
HSA	60	GHSA-125	

● Protein Free

● HSA 3 mg/ml

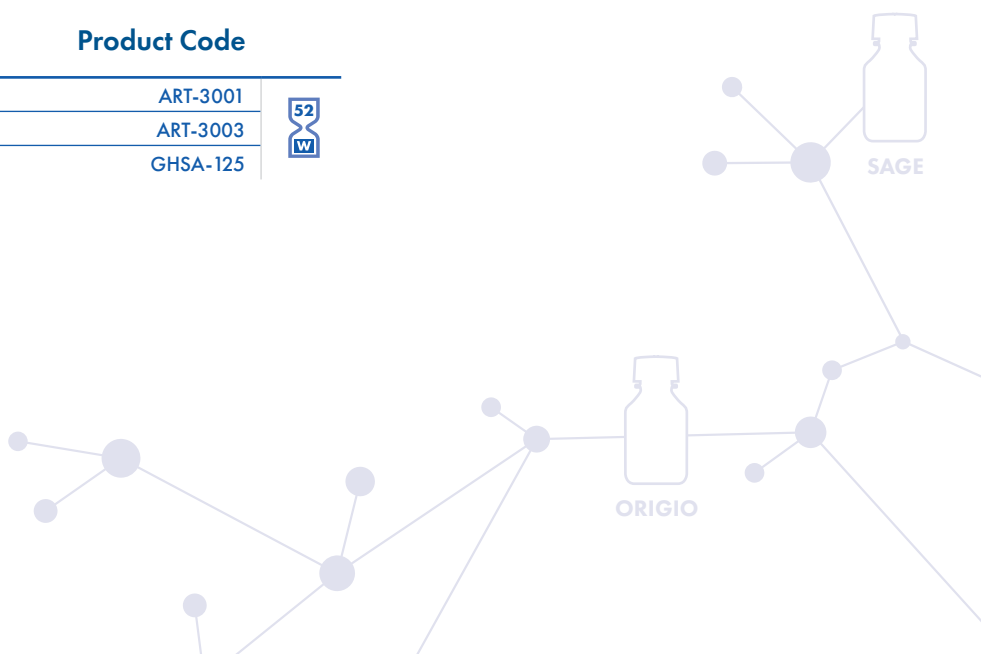
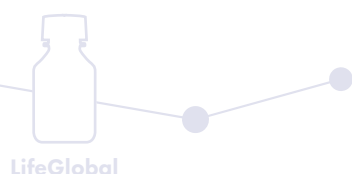
● HSA 5 mg/ml

● HSA 10 mg/ml

● with phenol red

✕ without phenol red

⌚ Shelf life (in weeks)



Product code overview

Fertilization

(ml) Product Code

Universal IVF Medium	●●●●●●	60	10310060
Universal IVF Medium	●●●●●●	100	10311010
Universal IVF Medium	●●●●●●	300	10315060
Universal IVF Medium	●●●●●●	60	10300060
Universal IVF Medium	●●●●●●	100	10301010
Universal IVF Medium	●●●●●●	300	10305060
ORIGIO® Sequential Fert™	●●●●●●	10	83010010
ORIGIO® Sequential Fert™	●●●●●●	60	83010060
ORIGIO® Sequential Fert™	●●●●●●	10	83020010
ORIGIO® Sequential Fert™	●●●●●●	60	83020060
Quinn's Advantage™ Protein Plus Fert Medium	●●●●●●	20	ART-1520
Quinn's Advantage™ Fertilization (HTF) Medium	●●●●●●	50	ART-1020
Quinn's Advantage™ Fertilization (HTF) Medium	●●●●●●	100	ART-1021
global® for Fertilization	●●●●●●	20	LGGF-020
global® for Fertilization	●●●●●●	50	LGGF-050
global® for Fertilization	●●●●●●	100	LGGF-100
global® for Fertilization	●●●●●●	500	LGGF-500
global® total® LP for Fertilization	●●●●●●	10	H5TF-010
global® total® LP for Fertilization	●●●●●●	20	H5TF-020
global® total® LP for Fertilization	●●●●●●	50	H5TF-050
global® total® LP for Fertilization	●●●●●●	100	H5TF-100
global® total® for Fertilization w/ HSA	●●●●●●	20	HGTF-020
global® total® for Fertilization w/ HSA	●●●●●●	50	HGTF-050
global® total® for Fertilization w/ HSA	●●●●●●	100	HGTF-100





Single Step Culture

	Description			(ml)	Product Code	
SAGE 1-Step™	Hyaluronan	●	●	10	67020010	26 W
SAGE 1-Step™	Hyaluronan	●	●	60	67020060	
global®		●	●	20	LGGG-020	
global®		●	●	50	LGGG-050	
global®		●	●	100	LGGG-100	10 W
global® total® LP		●	●	10	H5GT-010	
global® total® LP		●	●	30	H5GT-030	
global® total® LP		●	●	60	H5GT-060	
global® total® LP		●	●	100	H5GT-100	
global® total® w/ HSA		●	●	30	HGGT-030	
global® total® w/ HSA		●	●	60	HGGT-060	
global® total® w/ HSA		●	●	100	HGGT-100	

Sequential Culture

	Description			(ml)	Product Code	
ORIGIO® Sequential Cleav™	Hyaluronan	●	✗	10	83030010	26 W
ORIGIO® Sequential Cleav™	Hyaluronan	●	✗	60	83030060	
ORIGIO® Sequential Cleav™	Hyaluronan	●	●	10	83040010	
ORIGIO® Sequential Cleav™	Hyaluronan	●	●	60	83040060	
Quinn's Advantage Cleavage Medium		●	●	20	ART-1026	10 W
Quinn's Advantage Cleavage Medium		●	●	50	ART-1027	
ORIGIO® Sequential Blast™	Hyaluronan	●	✗	10	83050010	26 W
ORIGIO® Sequential Blast™	Hyaluronan	●	✗	30	83050060	
ORIGIO® Sequential Blast™	Hyaluronan	●	●	60	83060010	
ORIGIO® Sequential Blast™	Hyaluronan	●	●	100	83060060	

Culture Media with GM-CSF

	Description			(ml)	Product Code	
EmbryoGen®	GM-CSF	●	✗	3	12040003	26 W
BlastGen™	GM-CSF	●	✗	3	12050003	
EmbryoGen® & BlastGen™	GM-CSF	●	✗	6	12062003	

● Protein Free

● HSA 3 mg/ml

● HSA 5 mg/ml

● HSA 10 mg/ml

● with phenol red

✗ without phenol red

⌚ Shelf life (in weeks)

Store at 2-8°C, protected from light and tightly capped.



A solution as unique as your business

At CooperSurgical, we partner with you
to drive clinical efficiency

When you partner with CooperSurgical you become part of a truly global network of clinical experts ready to support you with highly specialized solutions, both for individual clinics and across large organizations. By providing you with optimal products, services and training our aim is to offer you the best possible support to drive the efficiency of your clinic – and achieve the best results.

Day-to-day delivery may vary according to geographical location