

**TRINOVA**BIOCHEM

European Distributor of

Preferred Cell Systems™

# Regenerative Medicine Assays

## Product List 2019

CELL TYPE	ASSAY NAME	ASSAY TYPE	APPLICATION
HEMATOPIETIC STEM CELLS	<a href="#">ColonyGro™</a>	Methylcellulose CFU master mix	Clonal methylcellulose proliferation and differentiation
	<a href="#">CAMEO™-4</a>	Miniaturized methylcellulose CFU assay	
	<a href="#">HALO® PCA</a> (HemoFLUOR™ PCA, HemoLIGHT™ PCA)	96-well suspension expansion culture™ bioluminescence assay	Proliferation and differentiation (CFU-equivalent)
	<a href="#">HALO® Real Time</a>		Real time proliferation
	<a href="#">HALO® QC</a>		Quality control
	<a href="#">HALO® SC-IPS/Potency</a> <a href="#">HALO® RS</a>		Determination of identity, purity and strength / Reference standard
	<a href="#">HALO® TE</a> (HemoFLUOR™ TE, HemoLIGHT™ TE)		Time to engraftment (after transplantation)
	<a href="#">HALO® PMT</a> (HemoFLUOR™ PMT, HemoLIGHT™ PMT)	Predictive 'global' patient monitoring after transplantation (4 population)	
<a href="#">CAMEO™-96</a>	Combined assay: methylcellulose CFU and bioluminescence	Proliferation and differentiation	
MESENCHYMAL STROMA CELLS	<a href="#">MSCGlo™ QC</a>	96-well suspension expansion culture™ bioluminescence assay	Quality control
	<a href="#">MSCGlo™ SC-IPS/Potency</a> <a href="#">MSCGlo™ RS</a>		Determination of identity, purity and strength / Reference standard
	<a href="#">MSCGlo™ Real Time</a>		Real time proliferation
IMMUNE CELLS	<a href="#">ImmunoGlo™</a> (ImmunoFLUOR™, ImmunoLIGHT™)	96-well suspension expansion culture™ bioluminescence assay	Lymphocyte proliferation
	<a href="#">ImmunoGlo™ Real Time</a>		Real time proliferation
	<a href="#">ImmunoGlo™ MLC</a> (ImmunoFLUOR™ MLC, ImmunoLIGHT™ MLC)		Mixed lymphocyte proliferation
	<a href="#">ImmunoGlo™ TCP</a>		T cell proliferation and expansion
PRIMARY STEM CELLS AND CELL LINES	<a href="#">STEMGlo™</a> (STEMFluor™, STEMLight™)	96-well suspension expansion culture™ bioluminescence assay	Proliferation
	<a href="#">STEMpredict™</a>		3 day predictive stem cell viability and functionality
	<a href="#">STEMclone™</a>	Combined assay: methylcellulose CFU and bioluminescence	Clonal methylcellulose proliferation and differentiation

Applications for **Human** cells; other species on request (Primate (NHP), Horse, Sheep, Pig, Rat, Dog and Mouse).

TB-PCsregm-PdL2019 - 1/15

Most assays are available **Low serum** and **Serum-free**, and need to be stored at -20°C. For further information please contact us:**TRINOVA**BIOCHEM

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## ► METHYLCELLULOSE CFU-ASSAYS

These are reagents and assays that allow the clonal detection in methylcellulose.

Designed for hematopoietic stem- and progenitor cells they provide an indication for erythroid, neutrophil and platelet production.

- **ColonyGro™** Methylcellulose CFU Master Mixes for 44 x 1 ml cultures performed in duplicate
- **CAMEO™-4** Miniaturized CFU complete assay kits, including culture plates for 50 x 0.1 ml cultures performed in quadruplicate

### ColonyGro™

#### Methylcellulose CFU Master Mixes for 44 x 1 ml cultures performed in duplicate

CATALOG NO.	DESCRIPTION	SIZE
<b>CG-0-100H</b>	ColonyGro™ without growth factors	100 ml
<b>CG-HPP1-100H</b>	ColonyGro™ for SC-HPP1	100 ml
<b>CG-HPP2-100H</b>	ColonyGro™ for SC-HPP2	100 ml
<b>CG-GEMM1-100H</b>	ColonyGro™ for SC-GEMM1	100 ml
<b>CG-GEMM2-100H</b>	ColonyGro™ for SC-GEMM2	100 ml
<b>CG-GEMM3-100H</b>	ColonyGro™ for SC-GEMM3	100 ml
<b>CG-GEM1-100H</b>	ColonyGro™ for SC-GEM1	100 ml
<b>CG-GEM2-100H</b>	ColonyGro™ for SC-GEM2	100 ml
<b>CG-GEM3-100H</b>	ColonyGro™ for SC-GEM3	100 ml
<b>CG-BFU1-100H</b>	ColonyGro™ for P-BFU1	100 ml
<b>CG-BFU2-100H</b>	ColonyGro™ for P-BFU2	100 ml
<b>CG-E-100H</b>	ColonyGro™ for CFU-E	100 ml
<b>CG-GM1-100H</b>	ColonyGro™ for P-GM1	100 ml
<b>CG-GM2-100H</b>	ColonyGro™ for P-GM2	100 ml
<b>CG-GM3-100H</b>	ColonyGro™ for P-GM3	100 ml
<b>CG-G-100H</b>	ColonyGro™ for G-CFC	100 ml
<b>CG-M-100H</b>	ColonyGro™ for M-CFC	100 ml
<b>CG-MK1-100H</b>	ColonyGro™ for P-Mk1	100 ml
<b>CG-MK2-100H</b>	ColonyGro™ for P-Mk2	100 ml
<b>CG-B-100H</b>	ColonyGro™ for P-Bcell	100 ml

Applications for **Human** cells; other species on request (Primate (**NHP**), **Horse, Sheep, Pig, Rat, Dog and Mouse**).

TB-PCsregm-PdL2019 - 2/15

Most assays are available **Low serum** and **Serum-free**, and need to be stored at -20°C. For further information please contact us:

## CAMEO™-4

A miniaturized methylcellulose CFC assay used in toxicity testing to detect the response of compounds on the differentiation and maturation process

- **Easy handling:** due to the optimized blend of the master mix it can simply be applied with a positive displacement pipette
- **Fast results in 10 - 12 days:** media formulations allows increased growth of colonies
- **Economical use of cells:** the miniaturized CFU-assay kit CAMEO™-4 requires only 1/10 the amount of target cells compared to traditional assays

CATALOG NO.	DESCRIPTION	SIZE
<b>KC-0-50H</b>	CAMEO™-4 without growth factors	38 ml + 50 plates
<b>KC-HPP1-50H</b>	CAMEO™-4 for SC-HPP1	38 ml + 50 plates
<b>KC-HPP2-50H</b>	CAMEO™-4 for SC-HPP2	38 ml + 50 plates
<b>KC-GEMM1-50H</b>	CAMEO™-4 for SC-GEMM1	38 ml + 50 plates
<b>KC-GEMM2-50H</b>	CAMEO™-4 for SC-GEMM2	38 ml + 50 plates
<b>KC-GEMM3-50H</b>	CAMEO™-4 for SC-GEMM3	38 ml + 50 plates
<b>KC-GEM1-50H</b>	CAMEO™-4 for SC-GEM1	38 ml + 50 plates
<b>KC-GEM2-50H</b>	CAMEO™-4 for SC-GEM2	38 ml + 50 plates
<b>KC-GEM3-50H</b>	CAMEO™-4 for SC-GEM3	38 ml + 50 plates
<b>KC-BFU1-50H</b>	CAMEO™-4 for P-BFU1	38 ml + 50 plates
<b>KC-BFU2-50H</b>	CAMEO™-4 for P-BFU2	38 ml + 50 plates
<b>KC-E-50H</b>	CAMEO™-4 for CFU-E	38 ml + 50 plates
<b>KC-GM1-50H</b>	CAMEO™-4 for P-GM1	38 ml + 50 plates
<b>KC-GM2-50H</b>	CAMEO™-4 for P-GM2	38 ml + 50 plates
<b>KC-GM3-50H</b>	CAMEO™-4 for P-GM3	38 ml + 50 plates
<b>KC-G-50H</b>	CAMEO™-4 for G- CFC	38 ml + 50 plates
<b>KC-M-50H</b>	CAMEO™-4 for M-CFC	38 ml + 50 plates
<b>KC-MK1-50H</b>	CAMEO™-4 for P-Mk1	38 ml + 50 plates
<b>KC-MK2-50H</b>	CAMEO™-4 for P-Mk2	38 ml + 50 plates
<b>KC-T-50H</b>	CAMEO™-4 for P-Tcell	38 ml + 50 plates
<b>KC-B-50H</b>	CAMEO™-4 for P-Bcell	38 ml + 50 plates

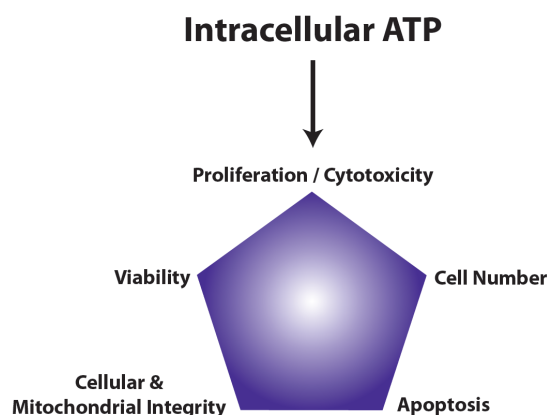
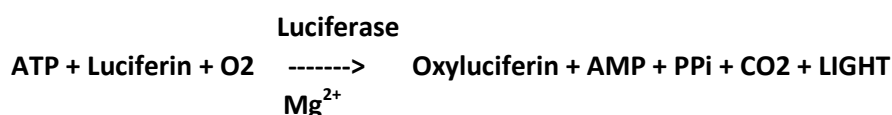
Miniaturized CFU complete assay kits, including culture plates for 50 x 0.1 ml cultures performed in quadruplicate

## ► INSTRUMENT-BASED CFU EQUIVALENT PROLIFERATION ASSAYS

PCS™ assays allow you to measure proliferation and differentiation of various stem- and progenitor cells. Choose from a variety of readouts including:

- BIOLUMINESCENCE
- FLUORESCENCE
- ABSORBANCE

### BIOLUMINESCENCE PRINZIPLE



### HALO® PCA

ATP bioluminescence CFU equivalent proliferation assay including ATP standard & controls

CATALOG NO.	DESCRIPTION	SIZE
<b>K2-PCA1-1</b>	HALO® PCA - Bioluminescence assay for SC-GEM2	1 x 96-well kit
<b>K2-PCA2-1</b>	HALO® PCA - Bioluminescence assay for SC-GEM3	1 x 96-well kit
<b>K2-PCA3-1</b>	HALO® PCA - Bioluminescence assay for P-GM1	1 x 96-well kit
<b>K2-PCA4-1</b>	HALO® PCA - Bioluminescence assay for P-GM2	1 x 96-well kit
<b>K2-PCA5-1</b>	HALO® PCA - Bioluminescence assay for SC-GEMM3	1 x 96-well kit

Applications for **Human** cells; other species on request (Primate (**NHP**), **Horse, Sheep, Pig, Rat, Dog and Mouse**).

TB-PCsregm-PdL2019 - 4/15

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## HemoFLUOR™ PCA

### Fluorescence CFU equivalent proliferation assay

CATALOG NO.	DESCRIPTION	SIZE
<b>K5-PCA1-1</b>	HemoFLUOR™ PCA - Fluorescence assay for SC-GEM2	1 x 96-well kit
<b>K5-PCA2-1</b>	HemoFLUOR™ PCA - Fluorescence assay for SC-GEM3	1 x 96-well kit
<b>K5-PCA3-1</b>	HemoFLUOR™ PCA - Fluorescence assay for P-GM1	1 x 96-well kit
<b>K5-PCA4-1</b>	HemoFLUOR™ PCA - Fluorescence assay for P-GM2	1 x 96-well kit
<b>K5-PCA5-1</b>	HemoFLUOR™ PCA - Fluorescence assay for SC-GEMM3	1 x 96-well kit

## HemoLIGHT™ PCA

### Absorbance / colorimetric CFU equivalent proliferation assay

CATALOG NO.	DESCRIPTION	SIZE
<b>K4-PCA1-1</b>	HemoLIGHT™ PCA - Absorbance assay for SC-GEM2	1 x 96-well kit
<b>K4-PCA2-1</b>	HemoLIGHT™ PCA - Absorbance assay for SC-GEM3	1 x 96-well kit
<b>K4-PCA3-1</b>	HemoLIGHT™ PCA - Absorbance assay for P-GM1	1 x 96-well kit
<b>K4-PCA4-1</b>	HemoLIGHT™ PCA - Absorbance assay for P-GM2	1 x 96-well kit
<b>K4-PCA5-1</b>	HemoLIGHT™ PCA - Absorbance assay for SC-GEMM3	1 x 96-well kit

## HALO® Real Time

### ATP bioluminescence stem and progenitor cell proliferation kit including standard and controls

- Non-lytic, bioluminescence assay.
- Multiplexing flow cytometric capability (e.g. CD133<sup>+</sup>, CD34<sup>+</sup>, or ALDH<sup>+</sup>)
- Watch the cells over 2 - 5 days taking bioluminescence readings at any times you like
- For bone marrow, umbilical cord blood, mobilized peripheral blood or purified populations (e.g. CD34<sup>+</sup>, CD133<sup>+</sup>)

CATALOG NO.	DESCRIPTION	SIZE
<b>K6-HPP1-1H</b>	HALO® Real Time - Bioluminescence assay for SC-HPP1	1 x 96-well kit
<b>K6-HPP2-1H</b>	HALO® Real Time - Bioluminescence assay for SC-HPP2	1 x 96-well kit
<b>K6-GEMM1-1H</b>	HALO® Real Time - Bioluminescence assay for SC-GEMM1	1 x 96-well kit
<b>K6-GEMM2-1H</b>	HALO® Real Time - Bioluminescence assay for SC-GEMM2	1 x 96-well kit
<b>K6-GEM1-1H</b>	HALO® Real Time - Bioluminescence assay for SC-GEM1	1 x 96-well kit
<b>K6-GEM2-1H</b>	HALO® Real Time - Bioluminescence assay for SC-GEM2	1 x 96-well kit
<b>K6-BFU1-1H</b>	HALO® Real Time - Bioluminescence assay for P-BFU1	1 x 96-well kit
<b>K6-BFU2-1H</b>	HALO® Real Time - Bioluminescence assay for P-BFU2	1 x 96-well kit

Applications for **Human** cells; other species on request (Primate (**NHP**), **Horse**, **Sheep**, **Pig**, **Rat**, **Dog** and **Mouse**).

TB-PCsregm-PdL2019 - 5/15

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<b>K6-GM1-1H</b>	HALO® Real Time - Bioluminescence assay for P-GM1	1 x 96-well kit
<b>K6-GM3-1H</b>	HALO® Real Time - Bioluminescence assay for P-GM3	1 x 96-well kit
<b>K6-MK1-1H</b>	HALO® Real Time - Bioluminescence assay for P-Mk1	1 x 96-well kit

**Kit content:** HALO®-Real Time reagent, HALO® master mix growth medium, sterile 96-well plate, sterile adhesive foil, assay manual.

### CAMEO™-96 (combined CFU & Bioluminescence)

**Methylcellulose assay for manual colony enumeration AND standardized ATP-bioluminescence**

CATALOG NO.	DESCRIPTION	SIZE
<b>KCO-0-1H</b>	CAMEO™-96 without growth factors	1 x 96-well kit
<b>KCO-HPP1-1H</b>	CAMEO™-96 for SC-HPP1	1 x 96-well kit
<b>KCO-HPP2-1H</b>	CAMEO™-96 for SC-HPP2	1 x 96-well kit
<b>KCO-GEMM1-1H</b>	CAMEO™-96 for SC-GEMM1	1 x 96-well kit
<b>KCO-GEMM2-1H</b>	CAMEO™-96 for SC-GEMM2	1 x 96-well kit
<b>KCO-GEM1-1H</b>	CAMEO™-96 for SC-GEM1	1 x 96-well kit
<b>KCO-GEM2-1H</b>	CAMEO™-96 for SC-GEM2	1 x 96-well kit
<b>KCO-BFU1-1H</b>	CAMEO™-96 for P-BFU1	1 x 96-well kit
<b>KCO-GM1-1H</b>	CAMEO™-96 for P-GM1	1 x 96-well kit
<b>KCO-MK1-1H</b>	CAMEO™-96 for P-Mk1	1 x 96-well kit
<b>KCO-T-1H</b>	CAMEO™-96 for P-Tcell	1 x 96-well kit
<b>KCO-B-1H</b>	CAMEO™-96 for P-Bcell	1 x 96-well kit

## ► PREDICTING BANKABILITY OF UMBILICAL CORD BLOOD

### STEMpredict™

**Specialized 3-day ATP bioluminescence HALO® assay performed on fresh cord blood prior to cryopreservation**

- STEMpredict™ is used to ensure that the cord blood stem cells are viable and have sufficient functionality to be permanently cryopreserved
- STEMpredict™ can also be used for cryopreserved cord blood samples and for mobilized peripheral blood to determine if stem cells have been sufficiently mobilized

CATALOG NO.	DESCRIPTION	SIZE
<b>K2-SP-1</b>	STEMpredict™ 3-day bioluminescence assay	1 x 96-well kit

Applications for **Human** cells; other species on request (Primate (**NHP**), **Horse, Sheep, Pig, Rat, Dog and Mouse**).

TB-PCsregm-PdL2019 - 6/15

Most assays are available **Low serum** and **Serum-free**, and need to be stored at -20°C. For further information please contact us:

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## ► STEM CELL QUALITY CONTROL ASSAY

### HALO® QC

#### Quality control assays for stem cells

- A 5- or 7-day, ATP bioluminescence stem cell quality assay used to monitor cell processing procedures 'before and after' a procedure to determine if stem cell quality has been affected
- HALO® QC can also be used to predict bankability of fresh umbilical cord blood for permanent storage
- HALO® QC now has a FDA master file number

CATALOG NO.	DESCRIPTION	SIZE
<b>K2-1QC-1</b>	HALO® QC - Bioluminescence assay for SC-GEMM1	1 x 96-well kit
<b>K2-1QC-2</b>	HALO® QC - Bioluminescence assay for SC-GEMM1	2 x 96-well kit
<b>K2-1QC-4</b>	HALO® QC - Bioluminescence assay for SC-GEMM1	4 x 96-well kit
<b>K2-2QC-2</b>	HALO® QC - Bioluminescence assay for SC-HPP2 + SC-GEMM1	2 x 96-well kit
<b>K2-2QC-4</b>	HALO® QC - Bioluminescence assay for SC-HPP2 + SC-GEMM1	4 x 96-well kit

## ► STEM CELL POTENCY, QUALITY AND RELEASE ASSAY

### HALO® SC-IPS/Potency

**A Reference Standard-based potency (proliferation potential), 'quality' (proliferation ability) and release assay for SC-HPP2 + SC-GEMM1 for RS & 1 sample**

CATALOG NO.	DESCRIPTION	SIZE
<b>K2-PQR-1</b>	HALO® SC-IPS/Potency - Bioluminescence assay	1 x 96-well kit

### HALO® RS

**ATP bioluminescence Reference Standard-based potency assay for SC-HPP2 + SC-GEMM1 for RS & 1 sample**

CATALOG NO.	DESCRIPTION	SIZE
<b>K2-PRS-1CB</b>	HALO® RS - Bioluminescence assay for Cord Blood	1 x 96-well kit
<b>K2-PRS-1MPB</b>	HALO® RS - Bioluminescence assay for Mobilized Peripheral Blood	1 x 96-well kit
<b>K2-PRS-1BM</b>	HALO® RS - Bioluminescence assay for Bone Marrow	1 x 96-well kit

Applications for **Human** cells; other species on request (Primate (**NHP**), **Horse, Sheep, Pig, Rat, Dog and Mouse**).

TB-PCsregm-PdL2019 - 7/15

Most assays are available **Low serum** and **Serum-free**, and need to be stored at -20°C. For further information please contact us:

## ▶ TIME TO ENGRAFTMENT AFTER TRANSPLANTATION

Predict time to erythroid, neutrophil and/or platelet engraftment using a rapid 5-day assay to culture peripheral blood or cells from bone marrow biopsies in low serum or serum-free reagents. The Time to Engraftment (TE) assays promote 'best practice criteria testing', by using non-subjective, instrument-based readouts.

### HALO® TE

#### ATP bioluminescence assays to indicate time to engraftment

CATALOG NO.	DESCRIPTION	SIZE
<b>K2-BTE-1</b>	HALO® TE - Bioluminescence assay for P-BFU1	1 x 96-well kit
<b>K2-GMTE-1</b>	HALO® TE - Bioluminescence assay for P-GM1	1 x 96-well kit
<b>K2-MKTE-1</b>	HALO® TE - Bioluminescence assay for P-Mk1	1 x 96-well kit
<b>K2-3PTE-3</b>	HALO® TE - Bioluminescence assay for P-BFU1, P-GM1 and P-Mk1	3 x 96-well kit

### HemoFLUOR™ TE

#### Fluorescence assays to indicate time to engraftment

CATALOG NO.	DESCRIPTION	SIZE
<b>K5-BTE-1</b>	HemoFLUOR™ TE - Fluorescence assay for P-BFU1	1 x 96-well kit
<b>K5-GMTE-1</b>	HemoFLUOR™ TE - Fluorescence assay for P-GM1	1 x 96-well kit
<b>K5-MKTE-1</b>	HemoFLUOR™ TE - Fluorescence assay for P-Mk1	1 x 96-well kit
<b>K5-3PTE-3</b>	HemoFLUOR™ TE – Fluorescence assay for P-BFU1, P-GM1 + P-Mk1	3 x 96-well kit

### HemoLIGHT™ TE

#### Absorbance assays to indicate time to engraftment

CATALOG NO.	DESCRIPTION	SIZE
<b>K4-BTE-1</b>	HemoLIGHT™ TE - Absorbance assay for P-BFU1	1 x 96-well kit
<b>K4-GMTE-1</b>	HemoLIGHT™ TE - Absorbance assay for P-GM1	1 x 96-well kit
<b>K4-MKTE-1</b>	HemoLIGHT™ TE - Absorbance assay for P-Mk1	1 x 96-well kit
<b>K4-3PTE-3</b>	HemoLIGHT™ TE - Absorbance assay for P-BFU1, P-GM1 + P-Mk1	3 x 96-well kit

Applications for **Human** cells; other species on request (**Primate (NHP), Horse, Sheep, Pig, Rat, Dog and Mouse**).

TB-PCSregm-PdL2019 - 8/15

Most assays are available **Low serum** and **Serum-free**, and need to be stored at -20°C. For further information please contact us:



## ▶ PATIENT 'GLOBAL' MONITORING AFTER TRANSPLANTATION

'Global' hematopoietic stem and progenitor cell complete assays to predict and monitor patient reconstitution after transplantation by detecting 4, 5 or 7 populations simultaneously

- Allows simultaneous detection of hematopoietic stem and progenitor cells to be measured at any time to demonstrate and follow reconstitution
- Faster, easier and more accurate to use than any traditional CFC assay, even with automated colony counting
- Results are obtained in only 5 days
- Allows comparison of patient results with time due to inclusion of assay standards and To determine 'global' reconstitution
- 3 assay formats available:
  - 4-Population assay for SC-GEMM1, P-BFU1, P-GM1 and P-Mk1, incl. control
  - 5-Population assay for SC-HPP2, SC-GEMM1, P-BFU1, P-GM1 and P-Mk1, incl. control
  - 7-Population assay for SC-HPP2, SC-GEMM1, P-BFU1, P-GM1, P-Mk1, P-Tcell, P-Bcell, incl. control

### HALO® PMT

ATP bioluminescence assays to monitor lympho-hematopoietic reconstitution

CATALOG NO.	DESCRIPTION	SIZE
<b>K2-4PMT-5</b>	HALO® PMT Bioluminescence assay for 4 populations	5 x 96-well kit
<b>K2-5PMT-6</b>	HALO® PMT Bioluminescence assay for 5 populations	6 x 96-well kit
<b>K2-7PMT-8</b>	HALO® PMT Bioluminescence assay for 7 populations	8 x 96-well kit

### HemoFLUOR™ PMT

Fluorescence assays to monitor lympho-hematopoietic reconstitution

CATALOG NO.	DESCRIPTION	SIZE
<b>K5-4PMT-5</b>	HemoFLUOR™ PMT - Fluorescence assay for 4 populations	5 x 96-well kit
<b>K5-5PMT-6</b>	HemoFLUOR™ PMT - Fluorescence assay for 5 populations	6 x 96-well kit
<b>K5-7PMT-8</b>	HemoFLUOR™ PMT - Fluorescence assay for 7 populations	8 x 96-well kit

### HemoLIGHT™ PMT

Absorbance assays to monitor lympho-hematopoietic reconstitution

CATALOG NO.	DESCRIPTION	SIZE
<b>K4-4PMT-5</b>	HemoLIGHT™ PMT - Absorbance assay for 4 populations	5 x 96-well kit
<b>K4-5PMT-6</b>	HemoLIGHT™ PMT - Absorbance assay for 5 populations	6 x 96-well kit
<b>K4-7PMT-8</b>	HemoLIGHT™ PMT - Absorbance assay for 7 populations	8 x 96-well kit

Applications for **Human** cells; other species on request (Primate (**NHP**), **Horse, Sheep, Pig, Rat, Dog and Mouse**).

TB-PCsregm-PdL2019 - 9/15

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## ▶ IMMUNE CELL FUNCTIONAL ASSAYS

Whether it is a simple lymphocyte proliferation assay, donor lymphocyte infusion (DLI) testing or mixed lymphocyte cultures, these assays are flexible for any laboratory

### ImmunoGlo™ - ImmunoFLUOR™ - ImmunoLIGHT™

#### ATP bioluminescence – Fluorescence - Absorbance/colorimetric lymphocyte proliferation assays

- Lymphocyte activation
- Test unprimed T cells in the presence of antibodies, enterotoxins, mitogens etc
- Cellular immune response studies
- Single cell, T lymphocyte cloning studies
- Test DLI (Donor Lymphocyte Infusion) samples for stimulation/induction prior to use
- Effect of accessory (non T cells) on T cell induction
- Effect of co-stimulators on T cell induction

CATALOG NO.	DESCRIPTION	SIZE
<b>KM1-LPA-1</b>	ImmunoGlo™ - <b>Bioluminescence</b> lymphocyte prolif. assay	1 x 96-well kit
<b>KM2-LPA-1</b>	ImmunoFLUOR™ - <b>Fluorescence</b> lymphocyte prolif. assay	1 x 96-well kit
<b>KM3-LPA-1</b>	ImmunoLIGHT™ - <b>Absorbance</b> lymphocyte prolif. assay	1 x 96-well kit

### ImmunoGlo™ Real Time

ATP bioluminescence stem and progenitor cell proliferation kit including standard and controls

- Non-lytic, bioluminescence assay – follow lymphocyte proliferation in real time
- Multiplexing flow cytometric capability
- Add ImmunoGlo Real Time reagent at the beginning of culture or at any time after culture initiation, and follow cell growth for up to 3 day
- Complete flexibility to use any mitogens, co-stimulators etc. and lymphocyte culture protocols
- For use with peripheral blood mononuclear cells (PBMS), lymphocyte sub-populations and lymphocyte tissues and organs

CATALOG NO.	DESCRIPTION	SIZE
<b>KM1-RT-1</b>	ImmunoGlo™ Real Time	1 x 96-well kit



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## ImmunoGlo™-MLC - ImmunoFLUOR™-MLC - ImmunoLIGHT™-MLC

**ATP bioluminescence - Fluorescence - Absorbance/colorimetric 1- or 2-way Mixed Lymphocyte Culture assays**

- One-way mixed lymphocyte culture (MLC) / reaction (MLR)
- Two-way mixed lymphocyte culture (MLC) / reaction (MLR)
- Allogeneic mixed lymphocyte culture.
- Cellular immune response
- Dendritic cell interactions
- Mesenchymal stem/stromal cell interactions
- Investigations of agents that activate/suppress MLC/MLR

CATALOG NO.	DESCRIPTION	SIZE
<b>KM1-MLC-1</b>	ImmunoGlo™-MLC - <b>Bioluminescence</b> MLC assay	1 x 96-well kit
<b>KM2-MLC-1</b>	ImmunoFLUOR™-MLC - <b>Fluorescence</b> MLC assay	1 x 96-well kit
<b>KM3-MLC-1</b>	ImmunoLIGHT™-MLC - <b>Absorbance</b> MLC assay	1 x 96-well kit

Available also as Immuno TCP – T Cell Proliferation Assay in analogy to ImmunoGlo TCP

## ImmunoGlo™ TCP

**ATP bioluminescence T lymphocyte cell proliferation and viability assay kit**

- Non-radioactive assay to measure T lymphocyte proliferation
- T lymphocyte proliferation assay kits which work right out of the box
- Equal or improved sensitivity to a radioactive marker and 10–100 times increased sensitivity than WST-1 or CFSE assays
- 3 assay kits available: Growth medium with IL-2, CD3 + CD28, or IL-2 + CD3 + CD28 for improved T cell proliferation
- A standardized 5-days incubation period can be varied if required
- Readout has been validated, and can easily re-validated with the included standards and controls

CATALOG NO.	DESCRIPTION	SIZE
<b>K2-T-1H</b>	ImmunoGlo™ TCP with IL-2 alone	1 x 96-well kit
<b>KM1-TCS1-1H</b>	ImmunoGlo™ TCP with CD3 + CD28	1 x 96-well kit
<b>KM1-TCS2-1H</b>	ImmunoGlo™ TCP with IL-2 + CD3 + CD28	1 x 96-well kit

Applications for **Human** cells; other species on request (Primate (**NHP**), **Horse, Sheep, Pig, Rat, Dog and Mouse**).

TB-PCsregm-PdL2019 - 11/15

Most assays are available **Low serum** and **Serum-free**, and need to be stored at -20°C. For further information please contact us:



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## ► MESENCHYMAL STEM/STROMAL CELL (MSC) ASSAYS AND REAGENTS

Use a quantitative MSC proliferation assay to characterize an MSC-derived, regenerative medicine product

- Monitor small, medium and large (bulk) MSC expansion (passaging)
- The MSCGlo™ includes standards and controls to calibrate and standardize and, if necessary, validate the assay
- For replacement of the manual CFU-F assays
- Multiplex with other assays such as flow cytometry for MSC and differentiation markers and gene expression analysis to obtain and correlate information from a single sample
- MSCGlo™ assays includes your choice of MSC-medium:
  - CRUX RUFA Human Platelet Lysate
  - MSCGro Low serum complete for Human, Primate, Rat or Mouse
  - MSCGro Serum-free, Xeno-free complete for Human, Primate, Rat or Mouse
  - MSCGro Humanized complete
  - MSCGro for Canine and Equine MSCs

### MSCGlo™ Real Time

**Real Time, non-lytic bioluminescence assay to monitor cell processing of mesenchymal stroma cells**

- Watch MSCs grow over 2-3 days by taking bioluminescence readings at any times you like
- Non-lytic, bioluminescence assay; thus compatible with downstream applications: e.g. flow cytometric analysis with fluorochrome-conjugated antibodies (CD73<sup>+</sup>, CD90<sup>+</sup>, CD105<sup>+</sup> and/or CD106<sup>+</sup>) to observe changes in phenotypic markers with time
- MSCGlo™ Real Time includes your choice of MSC-medium (MSCGro Medium or CRUX RUFA Human Platelet Lysate)

CATALOG NO.	DESCRIPTION	SIZE
<b>KMRT-CR-1</b>	MSCGlo™ Real Time incl. CRUX RUFA Research	1 x 96-well kit
<b>KMRT-LS-1</b>	MSCGlo™ Real Time incl. MSCGro Low serum complete medium	1 x 96-well kit
<b>KMRT-SF-1</b>	MSCGlo™ Real Time incl. MSCGro Serum-free medium	1 x 96-well kit
<b>KMRT-H-1</b>	MSCGlo™ Real Time incl. MSCGro Humanized complete medium	1 x 96-well kit



# TRINOVA<sup>3</sup>BIOCHEM

European Distributor of

Preferred Cell Systems™

## MSCGlo™ QC

### ATP bioluminescence MSC quality assays to monitor cell processing, cryopreservation and purification methods

- MSCGlo™ QC determines 'quality', that is the ability of mesenchymal stem/stromal cells to proliferate
- Instrument-based, incorporating an external standard and controls for assay standardization and validation
- Compare results over time for intra- and inter-laboratory studies
- Assay can usually be completed in 5 - 7 days of culture depending on the batch of MSCs

CATALOG NO.	DESCRIPTION	SIZE
<b>KLMC-CRQC-1</b>	MSCGlo™ QC incl. CRUX RUFA Human Platelet Lysate	1 x 96-well kit
<b>KLMC-LSQC-1</b>	MSCGlo™ QC incl. MSCGro Low serum complete medium	1 x 96-well kit
<b>KMRT-SFQC-1</b>	MSCGlo™ QC incl. MSCGro Serum-free, Xeno-free complete	1 x 96-well kit
<b>KMRT-HMQC-1</b>	MSCGlo™ QC incl. MSCGro Humanized complete medium	1 x 96-well kit

## MSCGlo™ SC-IPS/Potency

### ATP bioluminescence assays for in-house RS + MSC samples

- MSCGlo™ SC-IPS/Potency is the only reference standard-based potency assay for mesenchymal stem/stromal cells commercially available
- MSCGlo™ SC-IPS/Potency is based on the same proven principles of measuring potency of lymphohematopoietic stem cells as HALO® Potency
- Includes ATP standards and controls which, together with the reference standard, allows the assay to be validated

CATALOG NO.	DESCRIPTION	SIZE
<b>KLMC-CRP-1</b>	MSCGlo™ SC-IPS incl. CRUX RUFA Human Platelet Lysate	1 x 96-well kit
<b>KLMC-LSP-1</b>	MSCGlo™ SC-IPS incl. MSCGro Low serum complete medium	1 x 96-well kit
<b>KMRT-SFP-1</b>	MSCGlo™ SC-IPS incl. MSCGro Serum-free, Xeno-free complete	1 x 96-well kit
<b>KMRT-HMP-1</b>	MSCGlo™ SC-IPS incl. MSCGro Humanized complete medium	1 x 96-well kit

## MSCGlo™ RS

### ATP bioluminescence reference standard-based potency assays for MSC/MPC samples

- Contains cryopreserved reference standard cells to establish an in-house RS (reference standard)
- Standardized and validated ATP-bioluminescence assay to establish a cell dose-response curve to determine the proliferation potential
- Instrument based assay readout

Applications for **Human** cells; other species on request (Primate (**NHP**), **Horse, Sheep, Pig, Rat, Dog and Mouse**).

TB-PCsregm-PdL2019 - 13/15

Most assays are available **Low serum** and **Serum-free**, and need to be stored at -20°C. For further information please contact us:



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CATALOG NO.	DESCRIPTION	SIZE
<b>KLMC-CRRS-1CB*</b>	MSCGlo™ RS incl. CRUX RUFA Human Platelet Lysate	1 x 96-well kit
<b>KLMC- LSRS-1CB*</b>	MSCGlo™ RS incl. MSCGro Low serum complete medium	1 x 96-well kit
<b>KMRT-SFRS-1CB*</b>	MSCGlo™ RS incl. MSCGro Serum-free, Xeno-free complete	1 x 96-well kit
<b>KMRT-HMRS-1CB*</b>	MSCGlo™ RS incl. MSCGro Humanized complete medium	1 x 96-well kit
<b>KLMC-CRRS-1BM*</b>	MSCGlo™ RS incl. CRUX RUFA Human Platelet Lysate	1 x 96-well kit
<b>KLMC- LSRS-1BM*</b>	MSCGlo™ RS incl. MSCGro Low serum complete medium	1 x 96-well kit
<b>KMRT-SFRS-1BM*</b>	MSCGlo™ RS incl. MSCGro Serum-free, Xeno-free complete	1 x 96-well kit
<b>KMRT-HMRS-1BM*</b>	MSCGlo™ RS incl. MSCGro Humanized complete medium	1 x 96-well kit

\*CB = for MSCs from Cord Blood; BM = for MSCs from Bone Marrow

## ► STEMassays - PRIMARY STEM CELLS; STEM CELL LINES (ES- AND iPS-DERIVED CELLS) AND EX VIVO PRIMARY CELLS

### STEMGlo™

**Standardized ATP-bioluminescence for adherent and non-adherent primary cells, ES, iPS and cell lines**

CATALOG NO.	DESCRIPTION	SIZE
<b>KSG-A-1</b>	STEMGlo™ for adherent stem cells, ES, iPS, cell lines	1 x 96-well kit
<b>KSG-NA-1</b>	STEMGlo™ for non-adherent stem cells, ES, iPS, cell lines	1 x 96-well kit

### STEMFlour™

**Fluorescence proliferation assay for adherent and non-adherent primary cells, ES, iPS and cell lines**

CATALOG NO.	DESCRIPTION	SIZE
<b>KSF-A-1</b>	STEMFlour™ for adherent stem cells, ES, iPS, cell lines	1 x 96-well kit
<b>KSF-NA-1</b>	STEMFlour™ for non-adherent stem cells, ES, iPS, cell lines	1 x 96-well kit

### STEMLight™

**Absorbance proliferation assays for adherent and non-adherent primary cells, ES, iPS and cell lines**

CATALOG NO.	DESCRIPTION	SIZE
<b>KSL-A-1</b>	STEMLight™ for adherent stem cells, ES, iPS, cell lines	1 x 96-well kit
<b>KSL-NA-1</b>	STEMLight™ for non-adherent stem cells, ES, iPS, cell lines	1 x 96-well kit

Applications for **Human** cells; other species on request (**Primate (NHP), Horse, Sheep, Pig, Rat, Dog and Mouse**).

TB-PCsregm-PdL2019 - 14/15

Most assays are available **Low serum** and **Serum-free**, and need to be stored at -20°C. For further information please contact us:

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## STEMClone™

### Clonal methylcellulose proliferation and differentiation assay

- Manual colony enumeration AND standardized ATP-bioluminescence
- Equivalent to CAMEO™
- Based on the 'classic' colony-forming cell (CFC)-assay

CATALOG NO.	DESCRIPTION	SIZE
<b>KSC-1</b>	STEMClone™ - Clonal methylcellulose proliferation and differentiation assay	1 x 96-well kit

## About Us

TRINOVA BIOCHEM GmbH is the distributor of Preferred Cell Systems™ (PCS™) in Europe.

## Preferred Cell Systems™

Preferred Cell Systems™ - the exclusive manufacturer of all products originally produced by **HemoGenix®** - develops innovative, high-quality in vitro Assays and cell culture Media for Stem Cell Research, Cellular Therapy, In Vitro Toxicology and Regenerative Medicine.

Errors reserved!

Applications for **Human** cells; other species on request (Primate (**NHP**), **Horse, Sheep, Pig, Rat, Dog and Mouse**).

TB-PCsregm-PdL2019 - 15/15

Most assays are available **Low serum** and **Serum-free**, and need to be stored at -20°C. For further information please contact us: