

BD Stemflow™ Stem Cell Isolation and Analysis Kits

Features

Comprehensive systems for in-depth analysis and sorting of stem cells

Deliver a streamlined solution for consistent, reproducible experiments

Modular design provides flexibility to accommodate specific research needs

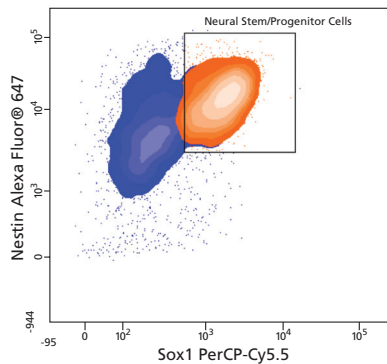


Figure 1. Neural induction of H9 human ES cells.

H9 human embryonic stem cell (hESC) derived embryoid bodies (EBs) were plated on BD Matrigel™-coated plates in neural induction medium with 1X ITS supplement, recombinant Noggin, and antibiotics, and cultured for 15 days. Cells were analyzed for multiple markers to resolve neural stem cells and progenitors using the BD Stemflow™ Human Neural Lineage Analysis Kit.

BD Stemflow™ cell isolation and analysis kits provide comprehensive systems for the reliable sorting and/or in-depth characterization of specific stem cell types in heterogeneous stem cell mixtures. The kits include all key reagents, plus robust protocols, and are designed to make it easier to get accurate results, while still providing the flexibility to accommodate specific research needs.

Multicolor Flow Cytometry for In-depth Analysis

Capitalizing on the powerful capabilities of multicolor flow cytometry, the kits allow researchers to perform multiparameter analysis at the single-cell level, enabling deep insight into cell identity and function. Data on the relative expression level of multiple markers can be obtained for individual cells in a heterogeneous sample.

A Total Solution System to Minimize Variability

Monoclonal antibodies specific to known key markers for the particular stem cell type are included. Antibodies are pre-conjugated and pre-titrated to improve productivity and reduce assay-to-assay variability. A detailed protocol, as well as fixation and permeabilization buffers in the kits that measure transcription factors, help standardize procedures and improve consistency of results.

Modular and Open to Accommodate Specific Needs

The open, modular architecture of the kits allow for the easy addition of supplementary fluorochrome-conjugated antibodies, to enable customization to your specific research needs. In addition, most kits are compatible with the use of cells expressing green fluorescent protein (GFP).

Visit bdbiosciences.com/stemcell for more information.

The interactive **BD Stem Cell Explorer** provides an overview of available single markers by stem cell type.

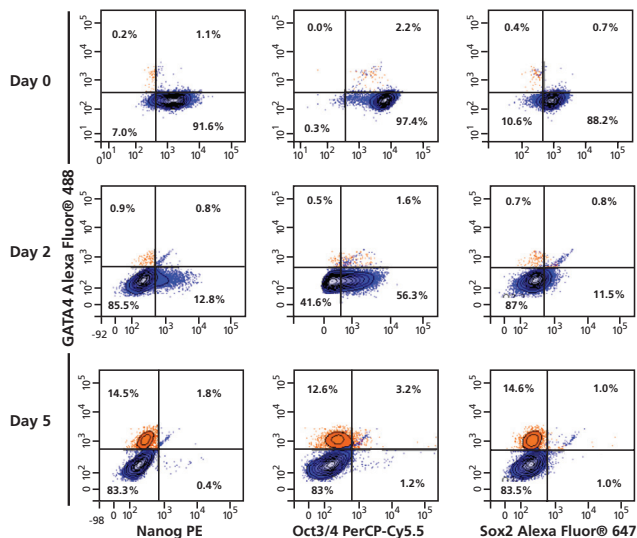


Figure 2. Differentiation of mESCs to mesendoderm monitored by flow cytometry.

Mouse ES cells (ESE14TG2a) were treated with 10 μ M of retinoic acid for 5 days. Cells were harvested on day 0, day 2, and day 5. Cells were analyzed for pluripotency and differentiation status using the BD Stemflow™ Mouse Pluripotent Stem Cell Transcription Factor Analysis Kit. In addition to the pluripotency markers Nanog, Oct3/4, and Sox2, the transcription factor GATA4 was simultaneously analyzed using a GATA4 Alexa Fluor@ 488 (Cat. No. 560330) drop-in antibody. After a 5-day treatment with retinoic acid, the percentage of cells expressing Nanog, Oct3/4, and Sox2 markedly decreased while the percentage of cells expressing GATA4 increased.

For Research Use Only. Not for use in diagnostic or therapeutic procedures.



BD Stemflow™ Stem Cell Isolation and Analysis Kits

Product List

Description	Antibodies*	Size	Cat. No.	Reg	Cell Surface Analysis	Intracellular Analysis	Sorting	Drop-ins	GFP Compatible
Pluripotent Stem Cells									
BD Stemflow™ Human Pluripotent Stem Cell Sorting and Analysis Kit	SSEA-1 FITC SSEA-3 PE Tra-1-81 Alexa Fluor® 647	50 tests	560461	RUO	X		X	X	
BD Stemflow™ Human and Mouse Pluripotent Stem Cell Analysis Kit	SSEA-1 PE Oct3/4 PerCP-Cy5.5 SSEA-4 Alexa Fluor® 647	50 tests	560477	RUO	X	X		X	X
BD Stemflow™ Human Pluripotent Stem Cell Transcription Factor Analysis Kit	hNanog PE Oct3/4 PerCP-Cy5.5 Sox2 Alexa Fluor® 647	50 tests	560589	RUO		X		X	X
BD Stemflow™ Mouse Pluripotent Stem Cell Transcription Factor Analysis Kit	mNanog PE Oct 3/4 PerCP-Cy5.5 Sox2 Alexa Fluor® 647	50 tests	560585	RUO		X		X	X
Definitive Endoderm									
BD Stemflow™ Human Definitive and Pancreatic Endoderm Analysis Kit	Pax-6 Alexa Fluor® 488 PDX-1 PE FoxA2 PE Sox2 PerCP-Cy5.5 Sox17 PerCP-Cy5.5 Nanog Alexa Fluor® 647	25 tests	562496	RUO		X		X	
Hematopoietic Stem Cells and Hematopoietic Progenitor Cells									
BD Stemflow™ Mouse Hematopoietic Stem and Progenitor Cell Isolation Kit	CD34 FITC c-Kit (CD117) PE Sca-1 PE-Cy5.5 APC Lineage Cocktail	100 tests (10 sorts of bone marrow pooled from 10 mice)	560492	RUO	X		X	X	
BD Stemflow™ Mouse Hematopoietic Stem Cell SLAM Code Panel	CD150 Alexa Fluor® 647 CD48 PE CD41 FITC	50 µg	562461	RUO	X		X	X	
Mesenchymal Stromal Cells									
BD Stemflow™ Human Mesenchymal Stem Cell Analysis Kit	CD90 FITC CD105 PerCP-Cy5.5 CD73 APC CD44 PE Negative Cocktail PE (CD11b, CD19, CD34, CD45, HLA-DR)	50 tests	562245	RUO	X			X	
Neural Stem Cells and their Derivatives									
BD Stemflow™ Human Neural Cell Sorting Kit	CD15 PE-Cy7 CD24 PE CD44 PerCP-Cy5.5 CD184 APC CD271 PerCP-Cy5.5	10 tests	562271	RUO			X	X	X
BD Stemflow™ Human Neural Lineage Analysis Kit	Sox2 PerCP-Cy5.5 GFAP Alexa Fluor® 647 Doublecortin PE Nestin Alexa Fluor® 647 Ki-67 Alexa Fluor® 488 Sox1 PerCP-Cy5.5 CD44 FITC	25 tests	561526	RUO		X		X	

*See the individual Technical Data Sheets for details about the additional contents of each kit, such as isotype controls, compensation controls, and fixation and permeabilization buffers.

For Research Use Only. Not for use in diagnostic or therapeutic procedures.

Alexa Fluor® is a registered trademark of Molecular Probes, Inc. The Alexa Fluor® dye antibody conjugates in these products are sold under license from Molecular Probes, Inc., for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430) are covered by pending and issued patents.

Cy™ is a trademark of Amersham Biosciences Corp. Cy dyes are subject to proprietary rights of Amersham Biosciences Corp and Carnegie Mellon University and are made and sold under license from Amersham Biosciences Corp only for research and in vitro diagnostic use. Any other use requires a commercial sublicense from Amersham Biosciences Corp, 800 Centennial Avenue, Piscataway, NJ 08855-1327, USA.

BD, BD Logo and all other trademarks are property of Becton, Dickinson and Company. © 2012 BD
23-14605-00



BD Biosciences
bdbiosciences.com