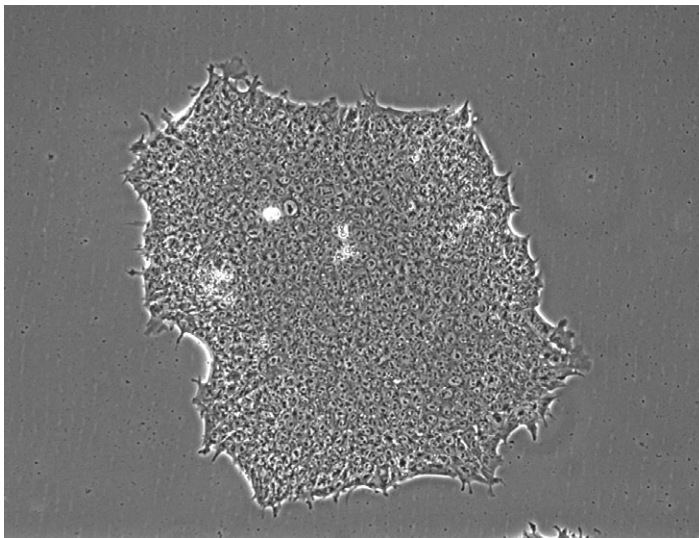


# ESI-051 Human Embryonic Stem Cell Line

Catalog Number: ES-703



## OVERVIEW

ESI BIO offers the highest quality human embryonic stem cell (hESC) lines that are among the best-characterized and documented lines commercially available today. The ESI cell lines are NIH registered and backed with donor history and testing information in best compliance with current Good Tissue Practice (cGTP) and conform to Global Ethical Standards and Clinical Cell Regulations. ESI hESCs were derived under current Good Manufacturing Practice (cGMP) conditions on human fibroblast feeder layers and are available in both research and clinical-grade formats. For most investigators, research banks of the ESI hESC lines provide a convenient entry point, while GMP compliant banks of these same cells create seamless translation into clinically relevant studies.

The ESI hESCs are well characterized in regards to genomic integrity, pluripotency status, and culturing behavior. Each line has been karyotyped, STR fingerprinted, HLA-typed, has high viability thawing recovery, is characterized by pluripotency marker expression, and is free of mycoplasma, pathogens, bacteria, yeast, and fungus. In addition to the standard pluripotency and karyotype analysis, the complete genome sequence is available for purchase.

## PRODUCT INFORMATION

<b>Format:</b>	Research grade
<b>Culture Conditions:</b>	Feeder independent in defined medium
<b>Size:</b>	$\geq 5 \times 10^5$ cells
<b>Passage Number:</b>	< 25
<b>Storage:</b>	Liquid nitrogen
<b>NIH Registration Number:</b>	0131
<b>Expanded and Banked By:</b>	BioTime, Inc.

## CHARACTERIZATION

<b>Karyotype:</b>	46, XX
<b>Positive stem cell markers:</b>	Oct4, Sox2, TRA-1-60, TRA-1-81



AMEL	X	D7S820	11
CSF1PO	10, 11	D8S1179	10, 13
D13S317	12	FGA	20, 22.2
D16S539	11	Penta D	9, 11
D18S51	18	Penta E	5, 17
D21S11	24.2, 31.2	THO1	6, 7
D3S1358	14, 16	TPOX	8, 11
D5S818	12, 13	vWA	15, 18

**Figure 1 (top).** Morphology of ESI-051 at passage 19 in feeder-free culture. **Figure 2 (middle).** Karyogram of ESI-051 at passage 19 displays a normal karyotype (46, XX). **Figure 3 (bottom).** STR profile of ESI-051.

## CULTURING GUIDELINES

We recommend that the ESI hESCs are thawed and established in the conditions detailed below. The culture platform can be subsequently adapted to preferred methods and reagents, as desired.

- Thaw 1 vial of cells in a single well of a 6-well plate using feeder-free culture conditions (e.g. TeSR™-E8™ Medium, Matrigel®).
- Change the medium daily.
- Passage cells when cultures are about 65-75% confluent using a non-enzymatic dissociation reagent (e.g. Cell Release Buffer®).
- Cells should be passaged at a ratio between 1:3 and 1:12 based on colony size and distribution.

## REFERENCES

Crook, J.M., et al. (2007) The Generation of Six Clinical-Grade Human Embryonic Stem Cell Lines. *Cell Stem Cell* 1(5): 490-494.

Funk, W.D., et al. (2012) Evaluating the genomic and sequence integrity of human ES cell lines; comparison to normal genomes. *Stem Cell Res* 8(2): 154-164.

## PRODUCT WARRANTY

BioTime, Inc. and/or its subsidiaries warrants its products as set forth in the General Terms and Conditions of Sale found on ESI BIO's website at [www.esibio.com/termsandconditions](http://www.esibio.com/termsandconditions).

## DISCLAIMER

BIOTIME, INC. AND/OR ALL ITS SUBSIDIARIES PRODUCTS MAY CONTAIN HUMAN OR OTHER ANIMAL SOURCE MATERIAL; TREAT AS POTENTIALLY INFECTIOUS. ALWAYS USE PROPER HANDLING TECHNIQUES. PRODUCTS SHOULD BE HANDLED AND USED ONLY BY PEOPLE TRAINED IN PROPER LABORATORY SAFETY PROCEDURES AT BIO-SAFETY LEVEL 2 OR HIGHER AS RECOMMENDED BY THE CDC FOR ANY HUMAN OR OTHER ANIMAL SOURCED MATERIAL.

©2014 BioTime, Inc. All rights reserved. ESI BIO, ESI BIO logo and all other trademarks mentioned herein are the property of BioTime, Inc. and/or its subsidiaries or their respective owners.

TeSR™-E8™ is a trademark of STEMCELL Technologies.  
Matrigel® is a registered trademark of Corning.  
Cell Release Buffer is distributed by Primorigen.

For support visit [www.esibio.com/support](http://www.esibio.com/support) or email [techsupport@esibio.com](mailto:techsupport@esibio.com)