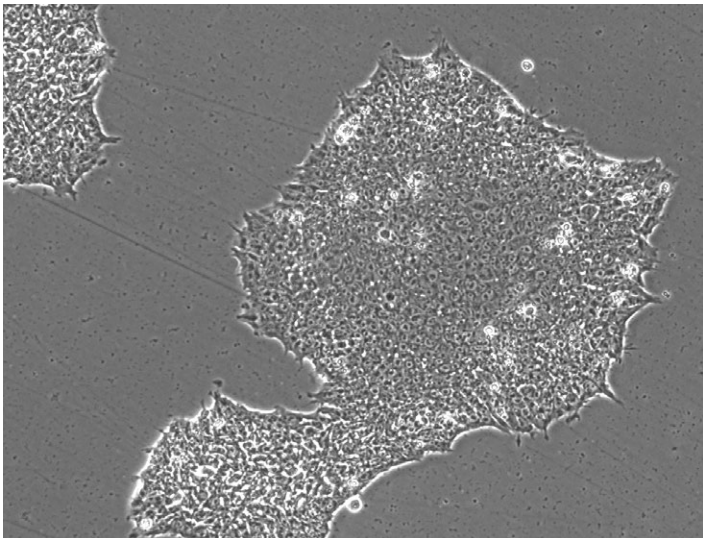
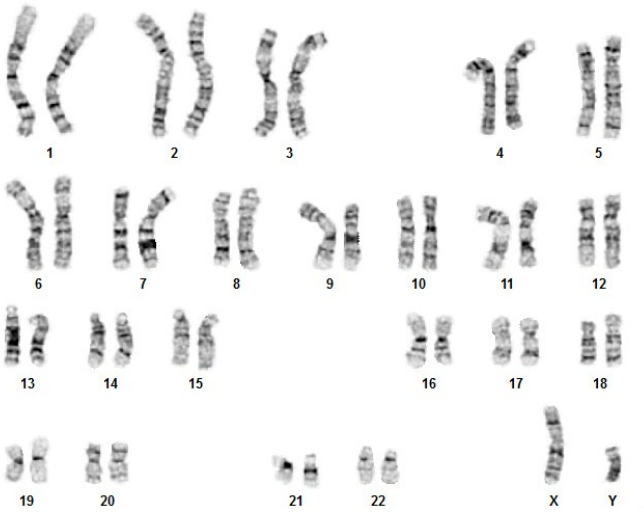
TECHNICAL DATA SHEET

ESI-049 Human Embryonic Stem Cell Line

Catalog Number: ES-702





AMEL	X, Y	D7S820	11, 13
CSF1PO	10, 12	D8S1179	14, 15
D13S317	12, 13	FGA	18, 20
D16S539	9, 11	Penta D	11, 15
D18S51	10, 13	Penta E	15, 18
D21S11	29, 31	THO1	9
D3S1358	15, 16	TPOX	8, 11
D5S818	11, 12	vWA	17, 19

Figure 1 (top). Morphology of ESI-049 at passage 17 in feeder-free culture. **Figure 2 (middle).** Karyogram of ESI-049 at passage 17 displays a normal karyotype (46, XY). **Figure 3 (bottom).** STR profile of ESI-049.

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

Format:	Research grade
Culture Conditions:	Feeder independent in defined medium
Size:	≥ 5 x 10^5 cells
Passage Number:	< 25
Storage:	Liquid nitrogen
NIH Registration Number:	0130
Expanded and Banked By:	BioTime, Inc.

CHARACTERIZATION

Karyotype:	46, XY
Positive stem cell markers:	Oct4, Sox2, TRA-1-60, TRA-1-81

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.**

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.

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