ES / iPS ENDODERM DIFFERENTIATION MONITORING KIT

[Code#: ES01-10] for Human Endoderm (96 tests)
[Code#: ES02-10] for Mouse Endoderm (96 tests)

FEATURES

- ELISA based endoderm differentiation monitoring
- Continuous cell culture after measurement is possible
- Great correlation with PCR, Flow cytometry, and Immunostaining

PRODUCT DESCRIPTION

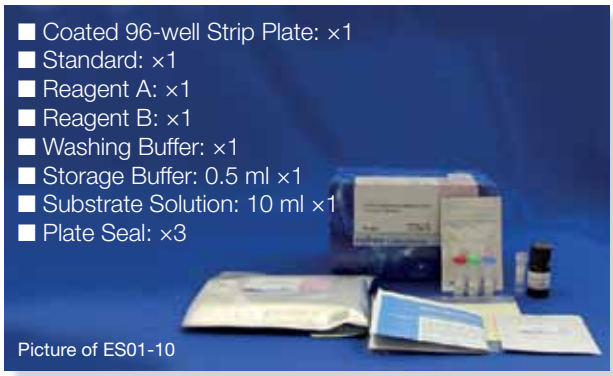
One of the secretory proteins as in a culture medium was found to be a marker of the conversion level of ES and iPS to endodermal cells. (Published in: H. Iwashita, S. Kume, PloS ONE., 2013, 8(5): e64291)

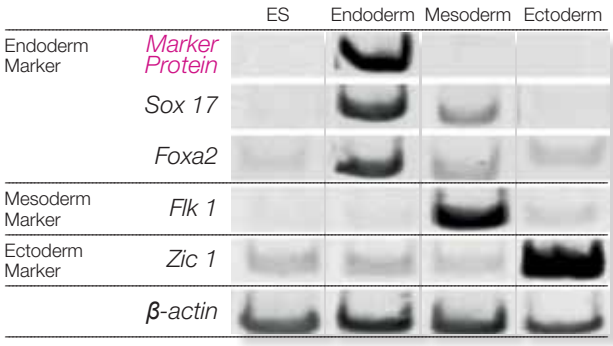
The amount of this marker protein in the cell culture supernatant is determined by ELISA. It can be used to monitor the efficiency of differentiation of endodermal cells from ES/iPS cells. Since this kit is designed for the 96-well microplate format, it is suitable for multiple sample measurements, such as screening of inducers for differentiation or an optimization of culture conditions.

RT-PCR MEASUREMENT OF EACH MARKER

The secretory protein has a good correlation with Sox 17 and Foxa2 which are commonly used proteins as markers of endoderm differentiation.

KIT CONTENTS for Human Endoderm

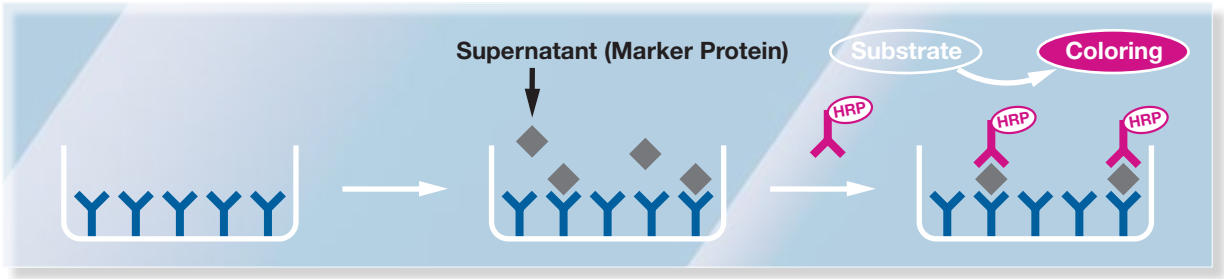




COMPARISON WITH CONVENTIONAL TECHNIQUES

	Dojindo Kit	PCR	Immunostaining	Flow Cytometry
Procedure	**3 hours**	> 7 hours	1-2 days	> 4 hours
Sample	**Supernatant**	mRNA	Whole cells	Whole cells
Continuous Cell Culture	**Possible**	Impossible	Impossible	Impossible
Marker	**Marker Protein**	Sox17, Foxa2	Sox17, Foxa2	CXCR4

MEASUREMENT PROCEDURE

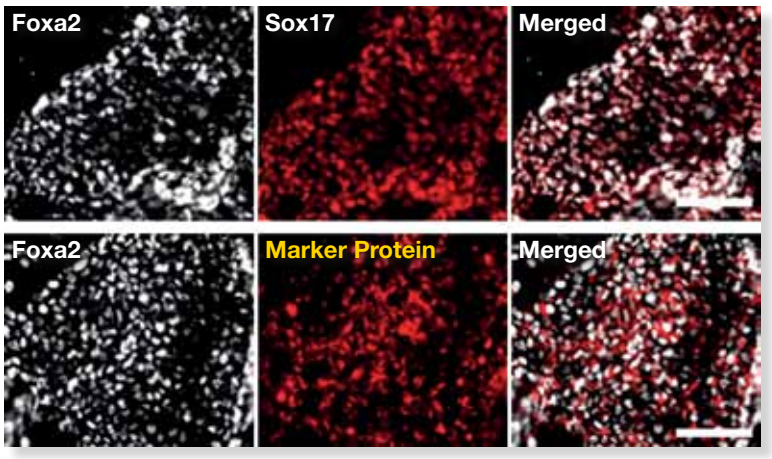


DOJINDO STATE OF THE ART LIFE SCIENCE TECHNOLOGIES

IMMUNOCYTOCHEMICAL(ICC) ANALYSIS
[Sample: Murine ES cell]

Most of the Foxa2 positive cells are co-stained with the marker protein.

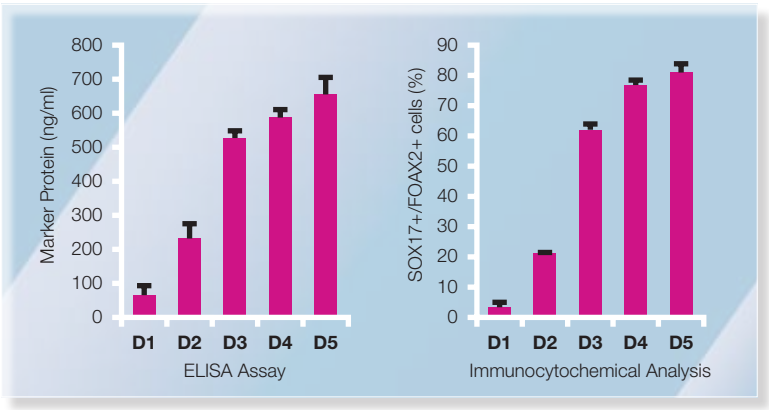
The three images in the upper line were obtained from conventional ICC analysis. Normally, Foxa2 and Sox17 double positive cells are defined as differentiated into endodermal cells.



DIFFERENTIATION MONITORING BY ICC AND ELISA
[Sample: Human iPS cell]

Human iPS 253G1 cells were differentiated into the definitive endoderm. They were being monitored with ELISA assay to measure the amount of marker protein secreted or ICC analysis for Sox17 and Foxa2 double positive cells.

The two bar graphs show the correlation of the amount of secreted protein with the amount of Sox17 and Foxa2 double positive cells from day 1 to day 5 (D1 to D5) of differentiation.

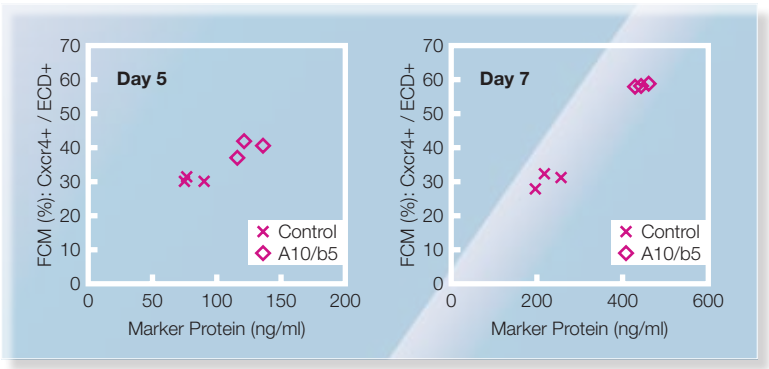


FLOW CYTOMETRY ANALYSIS
[Sample: Murine ES cell]

The proportion of definitive endoderm cells assayed by flow cytometry is correlated with the amount of the marker proteins assayed on day 5 or day 7 of the differentiation.

A10: Activin 10 ng/ml
b5: bFGF 5 ng/ml
Control: no growth factors

This product was developed by a collaborative work between Institute of Molecular Embryology and Genetics, Kumamoto University and Dojindo Laboratories.



DOJINDO STATE OF THE ART LIFE SCIENCE TECHNOLOGIES

EUROPEAN HEADQUARTERS
DOJINDO EU GMBH

Leopoldstr. 254, 80807 Munich, Germany
Phone +49 89 3540-4805
Fax +49 89 3540-4806
e-mail info@dojindo.eu.com

www.dojindo.eu.com

DISTRIBUTED BY