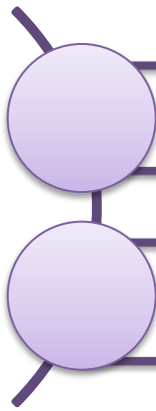


Capable of eliminating undifferentiated human ES/iPS cells

rBC2LCN-PE23

rBC2LCN (AiLecS1) has very high specificity to sugar chain which exists on the surface of undifferentiated human ES/iPS cells (hPSCs). So rBC2LCN is novel undifferentiated probe of hPSCs.

rBC2LCN-PE23 is recombinant lectin-toxin fusion protein of rBC2LCN with a catalytic domain of *Pseudomonas aeruginosa* exotoxin A. rBC2LCN-PE23 enters in hPSCs, cause the inhibition of protein synthesis and eliminate hPSCs.



Selectively eliminate hPSCs which remaining after inducing differentiation

Only add to culture medium without disperse

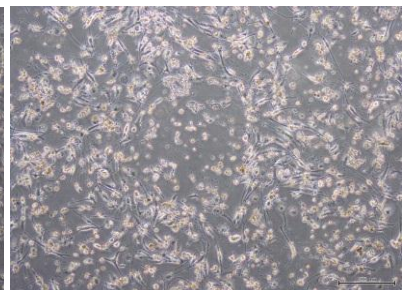
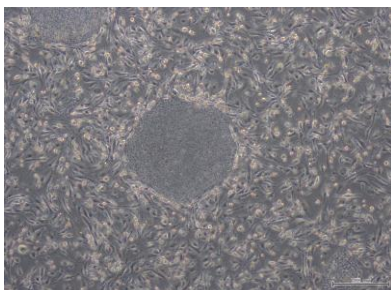
Differentiated human iPS cells (hiPSCs) derived from a disease patient into mesenchymal stem cells (MSCs), and added rBC2LCN-PE23 (final conc. 10µg/ml) in the culture medium containing hiPSCs and MSCs. After 24 hours in the presence of rBC2LCN-PE23, the colony of hPSCs began to collapse. And 48 hours in the presence of rBC2LCN-PE23, most of hPSCs were eliminated. On the other hand, MSCs are not affected in the presence of rBC2LCN-PE23.

0 hr

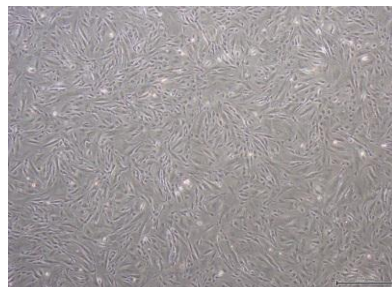
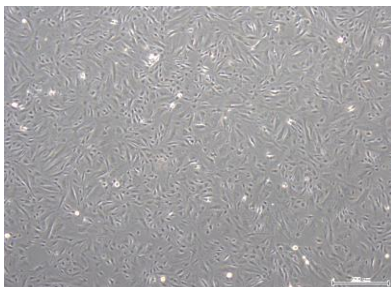
After 24 hr

After 48 hr

hiPSCs +
MSCs derived
from hPSCs



MSCs



< data from Jikei University School of Medicine, Ph, D. Hirota James Okano >

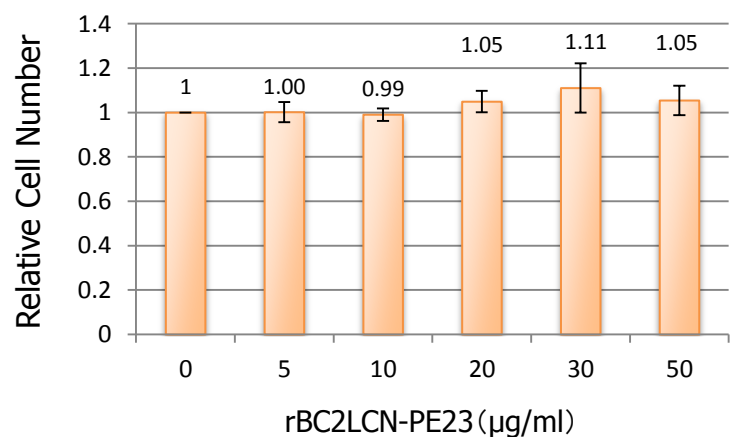
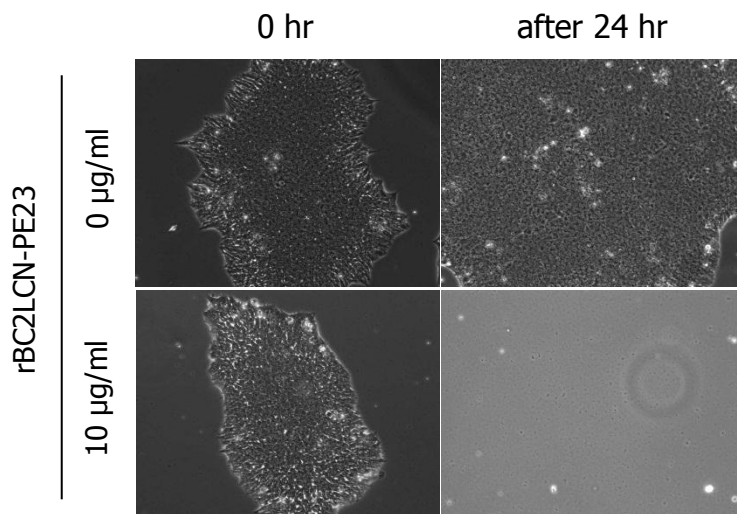
Protocols

1. Prepare differentiated cells from hPSCs.
2. Add rBC2LCN-PE23 (final conc. 10µg/ml) to culture medium (conc. of rBC2LCN-PE23 is described on the label).
3. Incubate at 37°C under 5% CO₂ (Please set time when remaining undifferentiated cells are eliminated).
4. Culture in medium suitable for differentiated cells.

Data

Add rBC2LCN-PE23 (final conc. 10µg/ml) to culture medium of human ES cells (WA01 strain). After 24 hours in the presence of rBC2LCN-PE23, human ES cells are eliminated in culture medium which rBC2LCN-PE23 was added.

Add rBC2LCN-PE23 (final conc. 5, 10, 20, 30, 50µg/ml) to culture medium of normal human dermal fibroblasts (NHDF), and show viable cell number 48 hr later. NHDF are not eliminated. (relative cell number : 0µg/ml rBC2LCN-PE23 = 1)。



References

1. Tateno, H., Onuma, Y., Ito Y, Minoshima, F., Saito, S., Shimizu, M., Aiki, Y., Asashima, M. and Hirabayashi, J.: *Stem Cell Reports*, **4**, 811 (2015).
2. Masuda, S., Miyagawa, S., Fukushima, S., Sougawa, N., Okimoto, K., Tada, C., Saito, A. and Sawa, Y.: *Protein Cell*, **6**, 469 (2015).

Product Name	Package	Wako Cat. No.	Grade
rBC2LCN-PE23	100µL 100µL x 5	180-03231 186-03233	for Cell Culture

✳After thawing, store at 2~10°C and use within four weeks. If you don't use within four weeks, you should make aliquots and store at -20°C. Avoid repeating freeze-thaw.

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