転移性を獲得した細胞の軟寒天中の行動と細胞接着及び細胞骨格の関係

1995 Fiscal Year Final Research Report Summary

転移性を獲得した細胞の軟寒天中の行動と細胞接着及び細胞骨格の関係

Research Project

Project/Area Number

06670218

Research Category

Grant-in-Aid for General Scientific Research (C)

Allocation Type

Single-year Grants

Research Field

Experimental pathology

Research Institution

Kanazawa University

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Project Period (FY)

1994 – 1995

Keywords

ras / myc SFME / r / mHM-SFME-1 / metastasis / Balb / c / actin-microfilaments / soft agar colony / cell adhesion

Research Abstract

Distribution of actin-microfilaments in two cell lines, one is ras/mycSFME and the other is r/mHM-SFME-1, was studied in a colony forming conditions in agar gel. The later, which derived from former, shows highly metastatic potentials in host animals whereas the former shows lower activity. Both cells were transformed by human c-Ha-ras and mouse c-myc genes and produced colonies in soft agar. The r/mHM-SFME-1 colonies were consisted of loosely packed cells with dispersed satellite cells around the colony whereas ras/mycSFME ones were made of fairly compacted cells. Rhodamine-

phalloidin staining showed that microfilaments of the two cells were present mainly at cell periphery. The distribution of microfilaments in this condition was more abundant in ras/mycSFME cells than in r/mHM-SFME-1 cells. The cell-cell adhesion developed well in former than in the later one.
Actin-microfilaments were detected mainly at the cell-cell contacted area in ras/mycSFME cells, whereas they were forming thin network under the surface of r/mHM-SFME-1 cells. When these cells were cultured on fibronectin coated dishes, however, they expressed a fibrobrastic appearance and spread well on the dishes. Then, the phenotypic difference in metastatic potentials of the two cells could be demonstrated in the three-dimensional cultures in soft agar gel.

Research Products (6 results)

All Other

All Publications (6 results)

[Publications] Matano,S.et al.: "Application of the polymerase chain reaction (PCR) to quantify micro-metastasis in an experimental animal." Cancer Letters. 91. 93-99 (1995)

[Publications] Okada,G.et al.: "A Mer-phenotype of ethionine-resistant HeLa S3 variants." In Vitro. 31. 168-170 (1995)

[Publications] Matano,S.et al.: "Detection of micro-metastasis by polymerase chain reaction (PCR)." Animal Cell Technology : Developments towards the 21st Century,. 1043-1047 (1995)

[Publications] Matano, S., Ryoyama, k., Nakamura, S., Okada, G., Nomura, T: "Application of the polymerase chain reaction (PCR) to quantify micro-metastasis in an experimental animal." Cancer Letters. 91. 93-99 (1995)

[Publications] Okada, G., Ruengmaneepaitoon, S., Nakano, K., Tokuyama, H., Nomura, T., Ryoyama, K., Yamaguchi, K.and Kameyama, T.: "A Mer-phenotype of ethionine-resistant HeLa S3 variants." In Vitro. 31. 168-170 (1995)

[Publications] Matano, S., Nakamura, S., Ryoyama, K., Okada, G., Nomura, T.: "Detection of micro-metastasis by polymerase chain reaction (PCR)." Animal Cell Technology : Developments towards the 21st Century. 1043-1047 (1995)

URL: https://kaken.nii.ac.jp/report/KAKENHI-PROJECT-06670218/066702181995kenkyu_seika_hokoku_

Published: 1997-03-03