論 文 要 旨

PCP4/PEP19 promotes migration, invasion and adhesion in human breast cancer MCF-7 and T47D cells

Yoshimura Takuya

Purkinje cell protein (PCP) 4/peptide (PEP) 19 is expressed in Purkinje cells where it has a calmodulin-binding, anti-apoptotic function. We recently demonstrated that PCP4/PEP19 is expressed and inhibit apoptosis in human breast cancer cell lines. In the present study we investigated the role of PCP4/PEP19 in cell morphology, adhesion, migration, and invasion in MCF-7 and T47D human breast cancer cell lines. Knockdown of PCP4/PEP19 reduced the formation of filopodia-like cytoplasmic structures and vinculin expression, and enhanced E-cadherin expression. Activities of migration, invasion, and cell adhesion were also decreased after the knockdown of PCP4/PEP19 in MCF-7 and T47D cells. These results suggested that PCP4/PEP19 promotes cancer cell adhesion, migration, and invasion and that PCP4/PEP19 may be a potential target for therapeutic agents in breast cancer treatment which act by inhibiting epithelial-mesenchymal transition and enhancing apoptotic cell death.