P013 Functional analysis of human delta-protocadherin 11 (PCDH11) and its implications in the progression of cancer

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Oncogenic transformation of cells is a multistep process with each genetic change conferring a proliferative advantage, increased cell survival or increased dissemination potential. We aim at analyzing the functions of hPCDH11X/Y, a δ-protocadherin that was recently linked to prostate tumor development.
Very little is known about the intracellular localization and transport of protocadherins in general, although this is clearly relevant for their functions. We have characterized the intracellular localization of different isoforms of PCDH11X/Y in various cell lines. In addition, we studied the trafficking behaviour of PCDH11 by live cell imaging.
Furthermore, we are presently investigating how PCDH11X/Y and associated proteins influence the cellular processes implicated in morphogenesis and tissue architecture, such as controlled proliferation, migration, differentiation and programmed cell death. Putative interaction partners of PCDH11 are being identified by use of the Mammalian Protein-Protein Interaction Trap (MAPPIT). Application of analytical MAPPIT in preliminary experiments already confirmed the interaction of PCDH11X/Y with Protein phosphatase 1α. A MAPPIT screening for novel interaction partners is ongoing.