Cell Counting Kit-8 (CCK-8) allows sensitive colorimetric assays for the determination of cell viability in cell proliferation and cytotoxicity assays. Dojindo’s highly water-soluble tetrazolium salt, WST-8, is reduced by dehydrogenase activities in cells to give a yellow-color formazan dye, which is soluble in the tissue culture media. The amount of the formazan dye, generated by the activities of dehydrogenases in cells, is directly proportional to the number of living cells. The detection sensitivity of CCK-8 is higher than the other tetrazolium salts such as MTT, XTT, MTS or WST-1.

Chi et al. investigated the function of circPVT1 on Glioblastoma.

CCK-8 and flow cytometry were utilised to estimate viability and apoptosis in both cells. qRT-PCR was performed to determine circPVT1 and miR-199a-5p expression. Western blot was conducted to determine apoptosis, migration and EMT-related proteins levels when silencing circPVT1. Subsequently, these parameters were re-tested after up-regulating miR-199a-5p.

CircPVT1 was highly expressed in Glioblastoma tissues. Silencing circPVT1 raised two cells apoptosis and reduced viability and migration capacity. Moreover, EGF-induced EMT was repressed by silencing circPVT1. In addition, miR-199a-5p expression was elevated when silencing circPVT1. And silencing circPVT1 exerted above changes via up-regulating miR-199a-5p. Finally, silencing circPVT1 repressed YAP1 and PI3K/AKT pathways via up-regulating miR-199a-5p.

This data suggested that silencing circPVT1 inhibited viability, migration, EGF-induced EMT and promoted apoptosis as well as repressed YAP1 and PI3K/AKT pathways by up-regulating miR-199a-5p.HIGHLIGHTSCircPVT1 expression is highly expressed in Glioblastoma tissues;Si-circPVT1 represses migration and promoted apoptosis in U539 and U251 cells;Si-circPVT1 represses migration and promoted apoptosis when elevating miR-199a-5p;Si-circPVT1 represses EGF-induced EMT when increasing miR-199a-5p;Si-circPVT1 suppresses YAP1 and PI3K/AKT pathways by up-regulating miR-199-5p [1].

1)
Chi G, Yang F, Xu D, Liu W. Silencing hsa_circ_PVT1 (circPVT1) suppresses the growth and metastases of glioblastoma multiforme cells by up-regulation of miR-199a-5p. Artif Cells Nanomed Biotechnol. 2020 Dec;48(1):188-196. doi: 10.1080/21691401.2019.1699825. PubMed PMID: 31865777.