

Abstract

In this chapter the expression levels of PRDX6 in spontaneous primary canine HSAs and HAs was investigated by immunohistochemical analysis, identifying marked significant expression of this protein in canine HSAs than HAs. Furthermore, both PRDX6 mRNA and protein were over expressed in HSA cell lines compared to normal canine endothelial cells, although some non- significant variation was observed between the different HSA cell lines. Notably, the small interfering RNA-induced downregulation of PRDX6 in HSA cell lines promoted apoptosis in the HSA cell lines. It means PRDX6 suppression increased the cytotoxicity of these cells suggests that PRDX6 might play an important cyto-protective role. PRDX6 expression levels might be a good predictor of tumour response, especially to oxidative stress-producing therapies. Furthermore, the manipulation of PRDX6 expression or inhibition of its ROS scavenging ability might provide a new paradigm for improved cancer treatment.