

Abstract

This bachelor thesis is focused on the PKN family of Ser/Thr kinases. This family includes three isoforms PKN1, PKN2 and PKN3. Especially it deals with the kinase PKN3 in more detail. These are kinases related to protein kinase C, belonging to the AGC superfamily. PKN kinases are activated via small G proteins of the Rho GTPase family or unsaturated fatty acids. PKN kinases are involved in many cellular processes, such as the regulation of cytoskeletal rearrangements, affect cell adhesion, cell movement, embryonic development and the cell cycle. Expression of PKN3 is particularly increased in cancer cells but is only present in small amounts in normal body cells. Therefore, PKN3 appears to be a very interesting therapeutic target for the treatment of cancer. Studies have shown that PKN3 has a significant effect on the motility of cancer cells, thus contributing to their migration and ability to form metastases.