

综述

P21-activated kinase 1 and breast cancer

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摘要 The p21 activated kinase 1 (PAK1) belongs to PAKs family, a group of highly evolutionarily conserved protein family of serine/threonine kinases, which acts as a downstream effector of the small GTPases Cdc42 and Rac1, firstly reported in 1994. As a serine/threonine kinase, PAK1 plays an important role in many cellular functions including cell morphogenesis, motility, survival, mitosis, angiogenesis, and tumorigenesis. More than 40 proteins have been reported to be phosphorylated by PAK1. Accumulating experimental data in multiple experimental systems provide compelling evidence that PAK1 plays an important role in breast cancer promotion and progression. PAK1 is overexpressed and/or hyperactivated in more than 50% of breast cancers. On the other hand, PAK1 overexpression in estrogen receptor α (ER- α) positive breast cancer is also closely associated with a reduced responsiveness to tamoxifen therapy. Since PAK1 plays such a vital role in breast cancer, PAK1 targeted therapeutic approaches are likely to be useful in breast cancer treatment as well as in other human cancers with PAK1 upregulation and/or hyperactivation.

关键词 [Breast neoplasms](#) [P21-activated kinase 1](#)

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