

Critical role of a kinase in breast cancer pathogenesis for use in diagnosis, therapy, and prognosis

SNF1-related serine/threonine kinase was found to play a critical role in the pathogenesis of breast cancers and is a potential diagnostic, prognostic, and therapeutic target.

Inventor

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STATE OF DEVELOPMENT

- In-vivo murine data

INTELLECTUAL PROPERTY

- USSN 7,119,185
- USSN 7,368,113

DESIRED PARTNERSHIPS

- License

REFERENCE MEDIA

- [Yeh et al. Proc Natl Acad Sci. 2013, 110\(15\) - 6103-8](#)
- [Yeh et al. J Clin Invest. 2011, 121\(3\) - 866-79](#)
- [Gardner et al. Development. 2000, 127\(20\) - 4493-509](#)

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Problem

Various studies have shown that estradiol and progesterone play a critical role in the development of breast cancer. Moreover, aberrant expression or mutations of protein kinases have been linked to the pathogenesis of cancer in humans. The identification of a protein or small molecule that provides a molecular target in this pathway would provide significant diagnostic and therapeutic benefit to numerous cancer patients.

Solution

This invention relates to the discovery of a SNF1-related serine/threonine kinase and its nucleotide sequence, Hormonally Up-regulated, Neu-Tumor-Associated Kinase (HUNK). HUNK is markedly down regulated in a variety of human breast cancers and provides a useful molecular target for diagnosis, prognosis, and therapy.

Advantages

- Use to diagnose ductal and lobular carcinomas of the breast
- Use to screen for a HUNK agonist or antagonist
- Use HUNK or HUNK nucleotide sequence for diagnosis and prognosis of disease
- Use of inverse correlation of HUNK expression and tumor grade for ovarian cancer prognosis