Progesterone receptor detection for breast cancer therapy

A test to detect phosphorylated progesterone receptors for patient stratification

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Applications

- Breast cancer diagnosis and stratification
- Personalized treatment planning

Key Benefits & Differentiators

- **Enhanced Diagnostic Accuracy:** Improves identification of breast cancer subtypes and progression stages.
- **Personalized Treatment:** Customizes treatment plans based on the detection of phosphorylated PRs, leading to better patient outcomes.
- **Early Intervention:** Potential to prevent or delay the onset of endocrine therapy resistance in luminal breast cancers.

Technology Overview

Breast cancer remains the most prevalent cancer among women and a leading cause of cancer-related deaths. Estrogen and progesterone play pivotal roles in breast cancer progression, with progesterone receptor (PR) status being a crucial marker. However, traditional treatments targeting these hormone receptors often face challenges due to tumor heterogeneity and resistance.

Researchers at the University of Minnesota have developed innovative methods for detecting phosphorylated Ser294 progesterone receptors (phospho-Ser294 PR) in patient samples. This technology involves using specific antibodies to detect phospho-Ser294 PR and determining associated gene expression levels. The methods compare gene expression profiles between patient samples and control samples, identifying patients who are likely to benefit from PR antagonist therapies, such as onapristone, mifepristone, aglepristone, and WAY-348.

Phase of Development

TRL: 3-4
Studies are ongoing to refine this detection method.

Desired Partnerships

This technology is now available for:
- License
- Sponsored research
- Co-development

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Technology ID
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Category
All Technologies
Life Sciences/Biochemicals & Small Molecules
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