Biomedical Research Tool

TechTransfer and Ventures

PEPD and PEPD-G278D Protein Synthesis

Optimized Production of Antitumor Agents

Recombinant human peptidase D (PEPD) and its enzymatically inactive mutant, PEPD-G278D, have demonstrated significant potential as antitumor agents through their ability to induce degradation of oncogenic drivers such as EGFR and HER2. Despite the therapeutic relevance, recombinant PEPD is commercially available only at high cost, and PEPD-G278D remains unavailable, underscoring a critical gap in research resources.

Researchers at Virginia Commonwealth University developed new expression plasmids designed to synthesize and mass produce PEPD and PEPD-G278D proteins. The method optimizes the efficiency and scalability of producing these recombinant proteins, potentially lowering production costs and increasing accessibility to these therapeutic agents.

The Technology

To enhance efficiency and enable scalable production, both PEPD and its inactive mutant PEPD-G278D were subcloned into high-expression plasmids. This strategic vector optimization led to a substantial increase in protein yield, facilitating mass production. Purity and biological activity of the expressed proteins were rigorously evaluated to ensure research-grade quality.

Benefits

- Cost-effective
- Efficient production
- Increased accessibility

Applications

- Synthesis of PEPD and PEPD-G278D
- Academic and clinical research

License Status:

This technology is available for licensing to industry for further development and commercialization

Category:

Biomedical Research Tool

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Additional Information:

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