

Anti-LANCL1 Antibody for Liver Cancer Treatment and Management

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Technology

Liver cancer is a highly lethal disease that has a significant impact on global health. A critical challenge in treating liver cancer is the presence of liver tumor-initiating cells (LTICs), which are responsible for initiating liver tumor formation and causing metastasis. These LTICs play a crucial role in the progression and recurrence of liver cancer.

Previously, we identified LANCL1 as a novel surface marker for LTICs (Hepatology 2024; 79:3230340). Our present novel invention involves monoclonal and humanized antibodies that specifically bind to LANCL1, with the potential to treat HCC and inhibit tumor growth. Evidence demonstrates that these antibodies effectively suppress HCC cell proliferation and tumor development.

Stage of Development

We have successfully engineered both humanized and monoclonal antibodies that precisely recognize and bind to the extracellular or transmembrane regions of the human LANCL1 protein. These antibodies effectively block or diminish LANCL1 activity, demonstrating promising results in vitro and in preclinical mouse models. Our anti-LANCL1 antibodies have shown significant efficacy in reducing hepatocellular carcinoma cell proliferation and tumor growth, underscoring their potential as a novel therapeutic option.



Key Advantages

By targeting LANCL1, we can inhibit the growth and metastasis of liver cancer at its very origin. This targeted approach offers a novel and potentially more effective treatment strategy, which could significantly improve clinical outcomes for patients suffering from liver cancer.



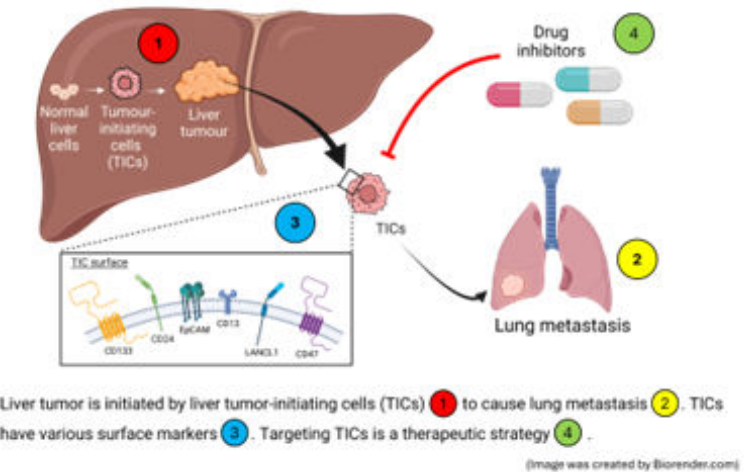
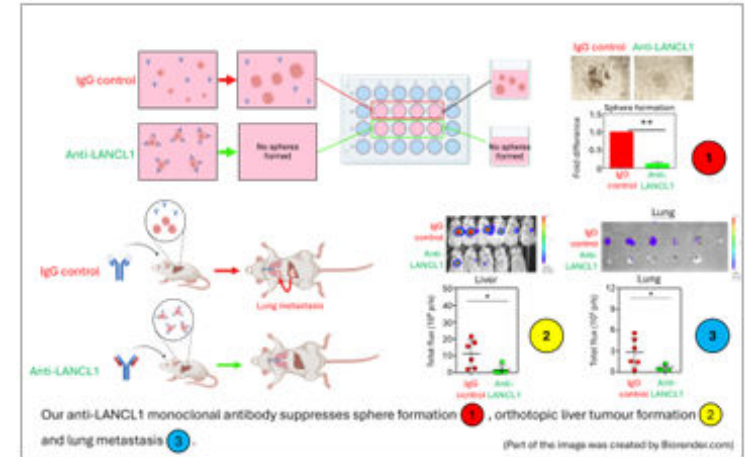
Opportunities

We are liaising with biopharmaceutical companies focused on developing diagnostic and therapeutic agents for cancers, notably HCC. We are actively engaged in collaborative discussions with industry partners, including a major biopharmaceutical firm, with ongoing meetings to explore licensing and development opportunities. These antibodies offer a promising platform for advancing targeted cancer therapies, addressing unmet needs in HCC treatment, and expanding the repertoire of precision oncology tools.



Intellectual Property

- US non-provisional patent (#19/333,895): Compositions of LANCL1 Antibodies and Methods of Use Thereof for Treating Liver Cancer
- Chinese patent (#2025113392428): LANCL1抗体的组合物及其用于治疗肝癌的方法
- US non-provisional patent (#18/189,528): The use of LANCL1 and antibodies thereof as a diagnostic and therapeutic target for the management and treatment of cancer



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