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Affinity-Matured Anti-Cd72 Nanobodies For Next-Generation CAR-T Immunotherapies

Tech ID: 34391 / UC Case 2024-081-0

TECHNOLOGY DESCRIPTION

This invention introduces a suite of affinity-matured anti-CD72 nanobodies engineered to dramatically improve therapeutic performance against CD72-expressing hematologic malignancies, including B-cell leukemia, mixed-lineage leukemia (MLL), non-Hodgkin’s lymphoma, multiple myeloma, and select autoimmune diseases.

These optimized nanobodies exhibit significantly enhanced binding to CD72, overcoming the limitations of current CD72-targeted immunotherapies that fail to achieve sufficient efficacy in tumors with low antigen density. The nanobodies are fully compatible with CAR engineering and can be seamlessly integrated into multiple CAR formats, enabling flexible therapeutic development pipelines.

When used to generate CD72-targeted CAR-T cells, these nanobodies drive robust cytotoxicity, improved tumor clearance, increased T-cell expansion, and durable anti-tumor immunity.

STAGE OF DEVELOPMENT

Preclinical in vitro and in vivo efficacy data.

RELATED MATERIALS

- [Affinity-matured CD72-targeting Nanobody CAR T-cells Enhance Elimination of Antigen-Low B-cell Malignancies](#) - 05/15/2025

PATENT STATUS

Patent Pending

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OTHER INFORMATION

KEYWORDS

CD72, Nanobodies,
Hematologic Malignancies

CATEGORIZED AS

- [Medical](#)
- [Disease: Cancer](#)
- [Therapeutics](#)

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