Enhanced Anti-PD-L1 Immunotherapy

(No. T4-2059)

Principal investigator

Rony Dahan

Faculty of Biology
Department of Systems Immunology

Overview

A novel approach for enhancing the efficacy of PD-L1 targeting antibodies by harnessing beneficial Fcl³R signaling pathways.

Strategy involves either

- (1) Co-administration of PD-L1 targeting antibodies with an FcÎ3RIIB-blocking antibody or
- (2) Glycoengineering of the Fc region of PD-L1 targeting antibodies, such as Avelumab, to increase their affinity for activating Fcγ receptors

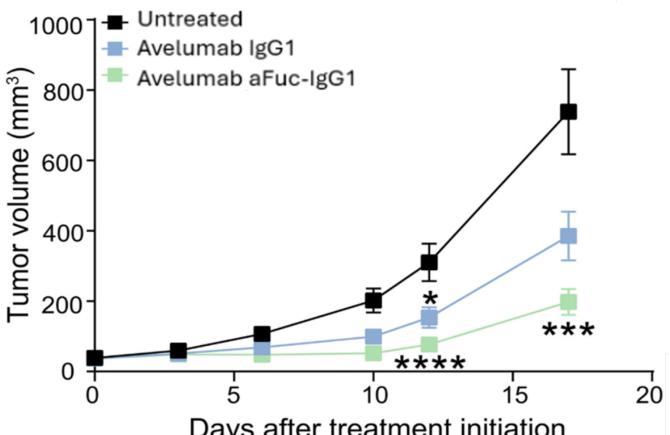
This approach significantly improves immune activation and tumor response to treatment.

Applications

- Enhanced anti-PD-L1 therapy for cancer treatment
- Â Potential applications in autoimmune and inflammatory diseases

Differentiation

- Glycoengineering of PDL-1 antibody to harness beneficial Fcl³R pathways
- Improved immune system activation for better and persistent tumor clearance



Days after treatment initiation
Fc glycoengineered PD-L1 antibody is showing improved anti-tumor activity in mice bearing MC38 colorectal tumors

Development Stage

- Validated in preclinical models, including mice with MC38 colorectal tumors and and mice with B16-F10 melanoma
- Fully humane Ab available for clinical evaluation

References

Cohen Saban et al [1]. Sci. Immunol. 8, eadd8005 (2023).

Patent Status

USA Published: Publication Number: 2023-0063965-A1