CTLA-4 and its Role in Cancer

CTLA-4 blockade as a therapeutic mechanism has been clinically validated as monotherapy or in combination with other anti-cancer agents. Researchers are investigating several approaches to build upon the established mechanism of CTLA-4 blockade to further improve the risk/benefit profile and broaden the understanding of its mechanism.

One approach aims to regulate the degree of immune activity using non-fucosylated antibodies to enhance Fc receptor binding. This modification was developed to increase the effects of CTLA-4 blockade and enhance intratumoral regulatory T cell depletion.

Another approach uses pro-antibodies to improve CTLA-4 blockade specificity by reducing antibody binding outside of the tumor microenvironment, sparing healthy tissues.

Novel approaches for optimizing CTLA-4 blockade’s ability to restore the immune response are currently under investigation.

References: