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(54) Title: BISPECIFIC MOLECULES HAVING IMMUNOREACTIVITY WITH PD-1 AND CTLA-4, AND METHODS OF USE THEREOF

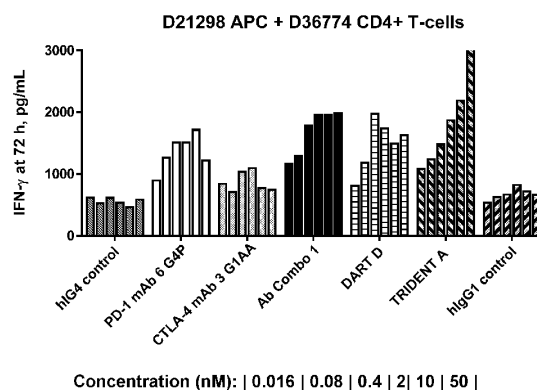


Figure 18

(57) Abstract: The present invention is directed to bispecific molecules (e.g., diabodies, bispecific antibodies, trivalent binding molecules, etc.) that possess at least one epitope-binding site that is immunospecific for an epitope of PD-1 and at least one epitope-binding site that is immunospecific for an epitope of CTLA-4 (i.e., a "PD-1 x CTLA-4 bispecific molecule"). The PD-1 x CTLA-4 bispecific molecules of the present invention are capable of simultaneously binding to PD-1 and to CTLA-4, particularly as such molecules are arrayed on the surfaces of human cells. The invention is directed to pharmaceutical compositions that contain such PD-1 x CTLA-4 bispecific molecules, and to methods involving the use of such bispecific molecules in the treatment of cancer and other diseases and conditions. The present invention also pertains to methods of using such PD-1 x CTLA-4 bispecific molecules to stimulate an immune response.



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