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Anti-PD-L1/4-1BB Bispecific Antibody INBRX-105

National Cancer Institute

Source

National Cancer Institute. *Anti-PD-L1/4-1BB Bispecific Antibody INBRX-105*. NCI Thesaurus. Code C159978.

A recombinant, humanized, bispecific antibody targeting both the human programmed death-ligand 1 (PD-L1) and 4-1BB (CD137; tumor necrosis factor receptor superfamily member 9; TNFRSF9), with potential checkpoint inhibitory, immunostimulating and antineoplastic activities. Upon administration, anti-PD-L1/4-1BB bispecific antibody INBRX-105 simultaneously targets and binds to 4-1BB, which is expressed on a variety of leukocyte subsets including activated T-lymphocytes, and PD-L1 expressed on tumor cells. Through 4-1BB binding, INBRX-105 acts as a conditional 4-1BB agonist, resulting in T-cell co-stimulation and enhanced anti-tumor activity. At the same time, INBRX-105 prevents PD-L1 from binding to and activating its receptor, programmed cell death 1 (PD-1; PDCD1; CD279; programmed death-1). This abrogates T-cell inhibition, activates antigen-specific T-lymphocytes and enhances cytotoxic T-cell-mediated tumor cell lysis, which may lead to a reduction in tumor growth. PD-L1 binding to PD-1 on activated T-cells inhibits the expansion and survival of CD8-positive T-cells, suppresses the immune system and results in immune evasion. 4-1BB, a surface glycoprotein of the tumor necrosis factor receptor superfamily, is an inducible costimulatory receptor that plays a key role in T-cell proliferation, survival and cytolytic activity.