

[Open Peer Review on Qeios](#)

# Anti-PD-L1/CTLA-4 Bispecific Antibody KN046

National Cancer Institute

## Source

National Cancer Institute. *Anti-PD-L1/CTLA-4 Bispecific Antibody KN046*. NCI Thesaurus. Code C157632.

A bispecific monoclonal antibody directed against both the immunosuppressive ligand, programmed cell death-1 ligand 1 (PD-L1; cluster of differentiation 274; CD274), and cytotoxic T-lymphocyte-associated antigen 4 (CTLA4; CTLA-4), with potential immune checkpoint inhibitory and antineoplastic activities. Upon administration, anti-PD-L1/CTLA-4 bispecific monoclonal antibody KN046 targets and binds to both PD-L1 expressed on tumor cells and CTLA-4 expressed on T-cells. This prevents the binding of PD-L1 to its receptor, programmed cell death protein 1 (PD-1, CD279), and inhibits the PD-1 and CTLA-4-mediated downregulation of T-cell activation and proliferation. This restores immune function and activates a sustained cytotoxic T-lymphocyte (CTL)-mediated immune response against tumor cells. Both PD-L1, which is overexpressed in many human cancer cell types, and CTLA-4, an inhibitory T-cell receptor, play a role in the downregulation of the immune system and tumor evasion from host immunity.