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Anti-PD-L1 Monoclonal Antibody MSB2311

National Cancer Institute

Source

National Cancer Institute. *Anti-PD-L1 Monoclonal Antibody MSB2311*. NCI Thesaurus. Code C155931.

A second-generation, humanized monoclonal antibody directed against the immunosuppressive ligand programmed cell death-1 ligand 1 (PD-L1; cluster of differentiation 274; CD274), with potential immune checkpoint inhibitory and antineoplastic activities. The anti-PD-L1 monoclonal antibody MSB2311 contains a unique, not as of yet elucidated, pH-dependent antigen binding property allowing the antibody to only bind to PD-L1 within the acidic tumor microenvironment (TME), while it is not able to bind to PD-L1 in normal, healthy tissue. Upon administration, once able to bind to PD-L1 in the TME, MSB2311 blocks the binding of PD-L1 to and activation of its receptor, programmed cell death 1 (PD-1; PDCD1; CD279; programmed death-1). This reverses T-cell inactivation caused by PD-L1/PD-1 signaling, increases T-cell expansion and enhances the cytotoxic T-lymphocyte (CTL)-mediated anti-tumor immune response against PD-L1-expressing tumor cells. PD-L1 is overexpressed by many human cancer cell types. PD-L1 binding to PD-1 on activated T-cells suppresses the immune system and results in immune evasion. PD-1 negatively regulates T-cell activation.