Anti-CSF1 Monoclonal Antibody PD-0360324

National Cancer Institute

Source

National Cancer Institute. Anti-CSF1 Monoclonal Antibody PD-0360324. NCI Thesaurus. Code C131301.

A humanized immunoglobulin (Ig) G2 monoclonal antibody (mAb) directed against the cytokine colony stimulating factor 1 (CSF1; CSF-1; macrophage colony-stimulating factor; M-CSF), with potential immunomodulating and antineoplastic activities. Upon administration, anti-CSF1 monoclonal antibody PD-0360324 targets, binds to and neutralizes CSF1. This prevents the binding of CSF1 to its receptor CSF1R (CD115; M-CSFR), which is expressed on various immune cells, such as monocytes and macrophages. This prevents CSF1R activation and CSF1R-mediated signaling in these cells; this inhibits monocyte differentiation, blocks the activity of macrophages, and reduces their production of inflammatory mediators, which reduces inflammation. By blocking the activity and proliferation of CSF1R-dependent tumor-associated macrophages (TAMs) in the tumor microenvironment, PD-0360324 reduces TAM-mediated immune suppression, decreases regulatory T-cells (Tregs), re-activates the immune system, and improves anti-tumor cell responses mediated by increasing infiltration by cytotoxic T-cells. TAMs play key roles in immune suppression, and tumor cell proliferation and survival. CSF-1 plays a key role in the regulation of the proliferation, differentiation and survival of monocytes and macrophages.