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Cabiralizumab

National Cancer Institute

Source

National Cancer Institute. *Cabiralizumab*. NCI Thesaurus. Code C123831.

A humanized monoclonal antibody directed against the tyrosine kinase receptor colony stimulating factor 1 receptor (CSF1R; CSF-1R), also known as macrophage colony-stimulating factor receptor (M-CSFR) and CD115 (cluster of differentiation 115), with potential antineoplastic activity. Upon administration, anti-CSF1R monoclonal antibody FPA008 binds to CSF1R expressed on monocytes, macrophages, and osteoclasts and inhibits the binding of the CSF1R ligands colony-stimulating factor-1 (CSF-1) and interleukin-34 (IL-34), to CSF1R. This prevents CSF1R activation and CSF1R-mediated signaling in these cells. This blocks the production of inflammatory mediators by macrophages and monocytes and reduces inflammation. By blocking the recruitment to the tumor microenvironment and activity of CSF1R-dependent tumor-associated macrophages (TAMs), FPA008 enhances T-cell infiltration and antitumor T-cell immune responses, which inhibits the proliferation of tumor cells. Additionally, FPA008 prevents the activation of osteoclasts and blocks bone destruction. TAMs play key roles in immune suppression and promoting inflammation, tumor cell proliferation and survival.