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# Emactuzumab

National Cancer Institute

## Source

National Cancer Institute. *Emactuzumab*. NCI Thesaurus. Code C125548.

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