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Carlumab

National Cancer Institute

Source

National Cancer Institute. *Carlumab*. NCI Thesaurus. Code C71010.

A human IgG1 kappa monoclonal antibody directed against human CC chemokine ligand 2 (CCL2) with potential antineoplastic activity. Carlumab binds to and inhibits CCL2, which may result in inhibition of angiogenesis and, so, tumor cell proliferation. Endothelium-derived CCL2 (monocyte chemoattractant protein; MCP1) is a member of the beta-chemokine family, can stimulate monocyte/macrophage migration and smooth muscle cell (SMC) proliferation, and plays a role in angiogenesis and tumor cell migration; CCL2 induction of angiogenesis may involve the upregulation of hypoxia-inducible factor 1 alpha (HIF-1 alpha) gene expression which, in turn, induces vascular endothelial growth factor-A (VEGF-A) gene expression.