

[Open Peer Review on Qeios](#)

Anti-CXCR4 Monoclonal Antibody PF-06747143

National Cancer Institute

Source

National Cancer Institute. *Anti-CXCR4 Monoclonal Antibody PF-06747143*. NCI Thesaurus. Code C131572.

A humanized immunoglobulin (Ig) G1 monoclonal antibody (mAb) against C-X-C chemokine receptor type 4 (CXCR4), with potential antineoplastic activity. Upon administration, anti-CXCR4 mAb PF-06747143 binds to CXCR4, thereby preventing the binding of stromal cell-derived factor-1 (SDF-1 or CXCL12) to CXCR4 and inhibiting CXCR4 activation. This results in decreased proliferation and migration of CXCR4-expressing tumor cells. In addition, PF-06747143 promotes cell death through the induction of both complement-dependent cytotoxicity (CDC) and antibody-dependent cellular cytotoxicity (ADCC). CXCR4, a chemokine receptor belonging to the G protein-coupled receptor (GPCR) family, is upregulated in several tumor cell types and plays an important role in cancer cell proliferation, survival, and chemotaxis, and in tumor angiogenesis.