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Balixafortide

National Cancer Institute

Source

National Cancer Institute. *Balixafortide*. NCI Thesaurus. Code C91094.

An orally bioavailable inhibitor of CXC chemokine receptor 4 (CXCR4) with receptor binding and hematopoietic stem cell-mobilization activities. Balixafortide binds to the chemokine receptor CXCR4, thereby preventing the binding of stromal derived factor-1 (SDF-1 or CXCL12) to the CXCR4 receptor and subsequent receptor activation. This may induce the mobilization of hematopoietic stem and progenitor cells from the bone marrow into blood. CXCR4, a chemokine receptor belonging to the G protein-coupled receptor (GPCR) gene family, plays an important role in chemotaxis and angiogenesis and is upregulated in several tumor cell types; CXCL12/CXCR4 interaction induces retention of hematopoietic cells in the bone marrow.