

[Open Peer Review on Qeios](#)

# Ponesimod

National Cancer Institute

## Source

National Cancer Institute. *Ponesimod*. NCI Thesaurus. Code C96534.

An orally available sphingosine-1-phosphate receptor 1 (S1PR1, S1P1) agonist that acts as a functional antagonist, with potential immunomodulating activity. Upon oral administration, ponesimod selectively binds to S1PR1 on lymphocytes and causes transient receptor activation followed by S1PR1 internalization and degradation. This results in the sequestration of lymphocytes in lymph nodes. By preventing egress of lymphocytes, ponesimod reduces both the amount of circulating peripheral lymphocytes and the infiltration of lymphocytes into target tissues. This prevents a lymphocyte-mediated immune response. S1PR1, a G-protein coupled receptor, plays a key role in lymphocyte migration from lymphoid tissues.