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# Adenosine A2A Receptor Antagonist PBF-509

National Cancer Institute

## Source

National Cancer Institute. *Adenosine A2A Receptor Antagonist PBF-509*. NCI Thesaurus. Code C121664.

An orally bioavailable adenosine A2A receptor (A2AR) antagonist, with potential antineoplastic activity. Upon administration, A2AR antagonist PBF-509 selectively binds to and inhibits A2AR expressed on T-lymphocytes. This abrogates the adenosine/A2AR-mediated inhibition of T-lymphocytes and activates a T-cell-mediated immune response against tumor cells, thereby reducing proliferation of susceptible tumor cells. A2AR, a G protein-coupled receptor, is highly expressed on the cell surfaces of T-cells and, upon activation by adenosine, inhibits their proliferation and activation. Adenosine is often produced in excess by cancer cells.