Adenosine A2A Receptor Antagonist AZD4635

National Cancer Institute

Source

National Cancer Institute. Adenosine A2A Receptor Antagonist AZD4635. NCI Thesaurus. Code C148039.

An orally bioavailable antagonist of the adenosine A2A receptor (A2AR; ADORA2A), with potential immunomodulating and antineoplastic activities. Upon administration, A2AR antagonist AZD4635 selectively binds to and inhibits A2AR expressed on T-lymphocytes. This blocks tumor-released adenosine from interacting with A2AR and prevents the adenosine/A2AR-mediated inhibition of T-lymphocytes. This results in the proliferation and activation of T-lymphocytes, and stimulates a T-cell-mediated immune response against tumor cells. A2AR, a G protein-coupled receptor, is highly expressed on the cell surfaces of T-cells and, upon activation by adenosine, inhibits T-cell proliferation and activation. Adenosine is often overproduced by cancer cells and plays a key role in immunosuppression.