

Alpha-adrenergic agonist

Adrenergic alpha-agonists (or alpha-adrenergic agonists) are a class of [sympathomimetic](#) agents that selectively stimulates alpha-adrenergic receptors. The alpha-adrenergic receptor has two subclasses α_1 and α_2 . Alpha 2 receptors are associated with sympatholytic properties. Alpha-adrenergic agonists have the opposite function of alpha-blockers. Alpha adrenoreceptor ligands mimic the action of epinephrine and norepinephrine signaling in the heart, smooth muscle, and central nervous system, with norepinephrine being the highest affinity. The activation of α_1 stimulates the membrane-bound enzyme phospholipase C, and activation of α_2 inhibits the enzyme adenylate cyclase. Inactivation of adenylate cyclase in turn leads to the inactivation of the secondary messenger cyclic adenosine monophosphate and induces smooth muscle and blood vessel constriction.

From:

<https://neurosurgerywiki.com/wiki/> - **Neurosurgery Wiki**

Permanent link:

https://neurosurgerywiki.com/wiki/doku.php?id=alpha-adrenergic_agonist

Last update: **2024/06/07 02:59**

