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# Albuterol

National Cancer Institute

## Source

National Cancer Institute. *Albuterol*. NCI Thesaurus. Code C215.

A racemic mixture of the r-isomer levalbuterol and s-albuterol, a short-acting sympathomimetic agent with bronchodilator activity. Albuterol stimulates beta-2 adrenergic receptors in the lungs, thereby activating the enzyme adenylate cyclase that catalyzes the conversion of adenosine triphosphate (ATP) to cyclic-3',5'-adenosine monophosphate (cAMP). Increased cAMP concentrations relax bronchial smooth muscle, relieve bronchospasms, and reduce inflammatory cell mediator release, especially from mast cells. Albuterol although to a lesser extent, also stimulates beta-1 adrenergic receptors, thereby increasing the force and rate of myocardial contraction.