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# Terbutaline Sulfate

National Cancer Institute

## Source

National Cancer Institute. *Terbutaline Sulfate*. NCI Thesaurus. Code C47748.

The sulfate salt form of terbutaline, an ethanolamine derivative with bronchodilating and tocolytic properties. Terbutaline sulfate selectively binds to and activates beta-2 adrenergic receptors, leading to intracellular adenylyl cyclase activation via a trimeric G protein and subsequent increase in cyclic cAMP production. Increased cAMP levels result in relaxation of bronchial and vascular smooth muscle mediated through the activation of protein kinase A (PKA), which phosphorylates proteins in control of muscle tone. cAMP also inhibits calcium ion release from intracellular stores, reduces calcium entry into cells and induces the sequestration of intracellular calcium all of which aids the relaxation of airway muscles. Terbutaline sulfate also increases mucociliary clearance and reduces release of inflammatory cell mediators.