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Ritodrine

National Cancer Institute

Source

National Cancer Institute. *Ritodrine*. NCI Thesaurus. Code C61929.

A phenethylamine derivative with tocolytic activity. Ritodrine binds to and activates beta-2 adrenergic receptors of myometrial cells in the uterus, which decreases the intensity and frequency of uterine contractions. Specifically, ritodrine probably activates adenylyl cyclase, thereby increasing production of cyclic adenosine monophosphate (cAMP), which in turn enhances the efflux of calcium from vascular smooth muscle cells. A lack of intracellular calcium prevents uterine myometrial contractions. In addition, this agent may directly inactivate myosin light chain kinase, a critical enzyme necessary for the initiation of muscle contractions.