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Ritodrine Hydrochloride

National Cancer Institute

Source

National Cancer Institute. *Ritodrine Hydrochloride*. NCI Thesaurus. Code C47706.

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