

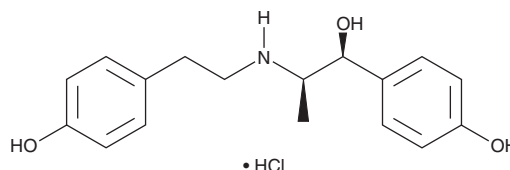
# PRODUCT INFORMATION



## Ritodrine (hydrochloride)

Item No. 26084

**CAS Registry No.:** 23239-51-2  
**Formal Name:** (αS)-rel-4-hydroxy-α-[(1R)-1-[[2-(4-hydroxyphenyl)ethyl]amino]ethyl]-benzenemethanol, monohydrochloride  
**Synonyms:** DU 21220, NSC 291565, (±)-Ritodrine  
**MF:** C<sub>17</sub>H<sub>21</sub>NO<sub>3</sub> • HCl  
**FW:** 323.8  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 226, 278 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Ritodrine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the ritodrine (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Ritodrine (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of ritodrine (hydrochloride) in these solvents is approximately 10, 11, and 12.5 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of ritodrine (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of ritodrine (hydrochloride) in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Ritodrine is an agonist of β<sub>2</sub>-adrenergic receptors (β<sub>2</sub>-ARs).<sup>1</sup> It induces relaxation of isolated pig detrusor muscle when used at concentrations ranging from 0.001 to 1 μM. Ritodrine (30 μg/ml) reduces electrically-induced isometric tension in myometrial strips isolated from rabbits on day 25 of pregnancy.<sup>2</sup> It also suppresses spontaneous motility of and increases concentration of cyclic AMP (cAMP) in isolated pregnant rat uterus.<sup>3</sup> Formulations containing ritodrine were previously used to stop premature labor.

### References

1. Larsen, J.J. α- and β-adrenoceptors in the detrusor muscle and bladder base of the pig and β-adrenoceptors in the detrusor muscle of man. *Br. J. Pharmacol.* **65(2)**, 215-222 (1979).
2. Schulman, H. The comparative actions of uterine inhibiting drugs. *Am. J. Obstet. Gynecol.* **130(6)**, 684-688 (1978).
3. Ikeda, S. and Tamaoki, H. Pharmacological investigation of ritodrine hydrochloride, a beta<sub>2</sub>-adrenoceptor stimulant. *Jpn. J. Pharmacol.* **36(4)**, 477-484 (1984).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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