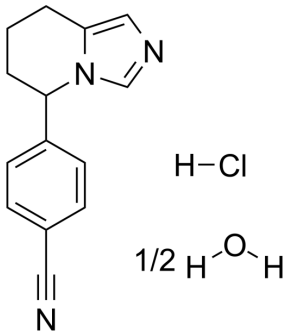
Fadrozole hydrochloride hemihydrate

Cat. No.:	HY-14247B
CAS No.:	176702-70-8
Molecular Formula:	$C_{14}H_{13}N_3.ClH._1/_2H_2O$
Molecular Weight:	268.74
Target:	Cytochrome P450
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Fadrozole hydrochloride hemihydrate is an orally active, potent, selective and nonsteroidal aromatase inhibitor, with an IC_{50} of 6.4 nM. Fadrozole hydrochloride hemihydrate inhibits the production of estrogen and progesterone, with IC_{50} values of 0.03 and 120 μM. Fadrozole hydrochloride hemihydrate shows prevention of spontaneous tumours. Fadrozole hydrochloride hemihydrate can be used for the research of estrogen-dependent disease and cancer[1][2][3].
IC_{50} & Target	Aromatase
In Vitro	Synthesis of other cytochrome P-450 dependent steroids can be suppressed to various degrees with higher doses of Fadrozole hydrochloride hemihydrate[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Fadrozole hydrochloride hemihydrate is able to inhibit the aromatase-mediated uterine hypertrophy in immature female rats with an ED_{50} of 0.03 mg/kg when given orally[1]. Fadrozole hydrochloride hemihydrate prevents the development of both benign and malignant spontaneus mammary neoplasns in female Sprague-Dawley rats. It also slows the spontaneous development of ptuitary pars distalis adenomas in female rats, and reduces the incidence of spontaneous hepatocellular tumours in male and female rats[2]. Administration of Fadrozole hydrochloride hemihydrate in male and female mice accompanies with a 70% reduction in parasite burden. This protective effect is associated in male mice with a recovery of the specific cellular immune response[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Ecotox Environ Safe. 2021, 111991.

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REFERENCES

[1]. Browne LJ, et al. Fadrozole hydrochloride: a potent, selective, nonsteroidal inhibitor of aromatase for the treatment of estrogen-dependent disease. J Med Chem. 1991 Feb;34(2):725-36.

[2]. Gunson DE, et al. Prevention of spontaneous tumours in female rats by fadrozole hydrochloride, an aromatase inhibitor. Br J Cancer. 1995 Jul;72(1):72-5.

[3]. Morales-Montor J, et al. Inhibition of p-450 aromatase prevents feminisation and induces protection during cysticercosis. Int J Parasitol. 2002 Oct;32(11):1379-87.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA