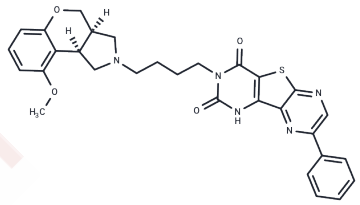
# Data Sheet (Cat.No.T11286)

TargetMol

## Fiduxosin

### Chemical Properties



CAS No. : 208993-54-8

Formula: C30H29N5O4S

Molecular Weight: 555.65

Storage: Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

### Biological Description

| | |
|---|---|
| Description | Fiduxosin is a selective and potent α1-adrenoceptor antagonist with inhibitory effects on α1a-adrenoceptor, α1b-adrenoceptor and α1d-adrenoceptor, with Ki values of 0.160 nM, 24.9 nM and 0.920 nM, respectively. Fiduxosin can be used for the treatment of benign prostatic hyperplasia. |
| Targets(IC50) | Adrenergic Receptor |
| In vitro | Fiduxosin, in addition to β-adrenoceptors (2-5 μM), exhibits low affinity for other adrenoceptors, including cloned human α2a-adrenoceptors (92 nM), α2c-adrenoceptors (22 nM), and rat neonatal lung α2b-adrenoceptors (21 nM). Moreover, Fiduxosin shows low affinity for 5HT1A receptors in rat cortex (29 nM) compared to its affinity at α1a-adrenoceptors (0.16 nM). In the rabbit urethra, Fiduxosin competitively antagonizes PE-induced responses with a pA2 value of 7.58[2]. |
| In vivo | In anesthetized dogs, Fiduxosin (i.v.) at doses of 30, 100, and 300 μg/kg antagonizes intraurethral pressure (IUP) responses to intravenous epinephrine (EPI). Transient effects on blood pressure are observed with Fiduxosin at doses of 178, 592, and 1780 μg/kg (i.v.) in spontaneously hypertensive rats (SHR), with the lowest dose having no effect on mean arterial pressure (MAP).In SHR, Fiduxosin at a dose of 3 μmol/kg or 1780 μg/kg (i.v.) causes a slight reduction in MAP. However, head-up tilt results in a further diminution of MAP at the 15-minute observation point, with minimal additional changes observed at times ≥30 minutes postdosing.When administered orally at doses of 0.1, 0.3, 1.0, and 3.0 mg/kg, Fiduxosin blocks prostatic intraurethral pressure (IUP) responses to a greater extent than MAP responses. The effective dose (ED50) for IUP is calculated to be 0.24 mg/kg[1]. |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 1.7997 mL | 8.9985 mL | 17.9969 mL |
| 5 mM | 0.3599 mL | 1.7997 mL | 3.5994 mL |
| 10 mM | 0.180 mL | 0.8998 mL | 1.7997 mL |
| 50 mM | 0.036 mL | 0.180 mL | 0.3599 mL |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Brune ME, et al. Effect of fiduxosin, an antagonist selective for alpha(1A)- and alpha(1D)-adrenoceptors, on intraurethral and arterial pressure responses in conscious dogs. J Pharmacol Exp Ther. 2002 Feb;300(2):487-94.
Hancock AA, et al. Preclinical pharmacology of fiduxosin, a novel alpha(1)-adrenoceptor antagonist with uroselective properties. J Pharmacol Exp Ther. 2002 Feb;300(2):478-86.