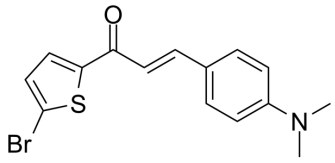
TB5

Cat. No.:	HY-100975
CAS No.:	948841-07-4
Molecular Formula:	$C_{15}H_{14}BrNOS$
Molecular Weight:	336.25
Target:	Monoamine Oxidase
Pathway:	Neuronal Signaling
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 10 mg/mL (29.74 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.9740 mL	14.8699 mL	29.7398 mL
5 mM	0.5948 mL	2.9740 mL	5.9480 mL
10 mM	0.2974 mL	1.4870 mL	2.9740 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

TB5 is a potent, selective and reversible inhibitor of hMAO-B with a K_i value of 0.11±0.01 μM.

IC_{50} & Target

Ki: 0.11±0.01 μM (hMAO-B)[1]

In Vitro

TB5 and TB8 interacts with the catalytic site of hMAO-B and hMAO-A with a competitive mode of inhibition. TB5 shows the best inhibitory activity and higher selectivity toward hMAO-B, with K_i and SI values of 0.11±0.01μM and 13.18, respectively. hMAO-B inhibition by compound TB5 and hMAO-A inhibition by compound TB8 are completely reversed after 24 h of dialysis. Cytotoxicity studies show TB5 is nontoxic at 5 and 25 μM, resulting in cell viabilities of 95.75% and 84.59 %, respectively[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Compounds are dissolved in DMSO (5 mg/mL) and diluted with PBS/EtOH (70:30).Kinetic analyses are carried out for TB5 and TB8. A set of Lineweaver–Burk plots are constructed in the absence and presence of various concentrations of compounds TB5 and TC8. The set consists of five graphs, each constructed by measuring MAO-B and MAO-A catalytic rates at different substrate concentrations (0.1-1 μM). The first Lineweaver–Burk plot is constructed in the absence of inhibitor,

	while the remaining four graphs are constructed in the presence of different concentrations of TB5 and TB8[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Kinase Assay [1]	Compounds are dissolved in DMSO (5 mg/mL) and diluted with PBS/EtOH (70:30).Kinetic analyses are carried out for TB5 and TB8. A set of Lineweaver–Burk plots are constructed in the absence and presence of various concentrations of compounds TB5 and TC8. The set consists of five graphs, each constructed by measuring MAO-B and MAO-A catalytic rates at different substrate concentrations (0.1-1 μM). The first Lineweaver–Burk plot is constructed in the absence of inhibitor, while the remaining four graphs are constructed in the presence of different concentrations of TB5 and TB8[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Cell Assay [1]	In vitro cytotoxicity of brominated thiophene chalcones and standard MAO inhibitors are tested in human HepG2 hepatic cancer cells at three different concentrations (1, 5 and 25 μM)[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Mathew B, et al. Synthesis, Biochemistry, and Computational Studies of Brominated Thienyl Chalcones: A New Class of Reversible MAO-B Inhibitors. ChemMedChem. 2016 Jun 6;11(11):1161-71.

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