

Product Data Sheet

Product Name: NBI-98782

Cat. No.: GC36705

Chemical Properties

Cas. No. 85081-18-1

SMILES COC(C=C1CCN2C[C@@H](CC(C)C)[C@@H]3O)=C(C=C1[C@]2(C3)[H])OC

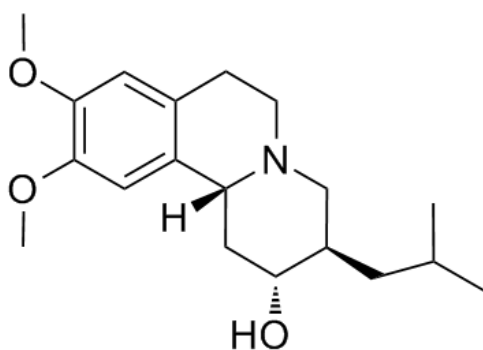
Formula $C_{19}H_{29}NO_3$ M.Wt 319.44

Solubility DMSO: 33.33 mg/mL (104.34 mM) Storage Store at -20°C; protect from light

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Protocol

Animal experiment [1]:

Animal models Male C57BL/6 J mice

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

Male C57BL/6 J mice, weighing 20-25g, were group housed (four per cage) in a controlled environment held at $21\pm 2^{\circ}\text{C}$ and $50\pm 15\%$ relative humidity on a 14/10h light-dark cycle. Food and water were available ad libitum. NBI-98782 and tetrabenazine were dissolved in 30% propylene glycol and 20% polyethylene glycol 400 in 0.25% methyl cellulose (400cps) in water. NBI-98782 was orally administered (10mg/kg/day) for 7 days. Microdialysis was performed on the 8th day.

Dosage form 10mg/kg/day for 7 days; p.o.

Applications NBI-98782 treatment significantly decreased basal levels of dopamine and serotonin, with a trend to decrease norepinephrine levels in mice.

References:

[1] Huang M, He W, Rajagopal L, et al. Effects of NBI-98782, a selective vesicular monoamine transporter 2 (VMAT2) inhibitor, on neurotransmitter efflux and phencyclidine-induced locomotor activity: Relevance to tardive dyskinesia and antipsychotic action[J]. Pharmacology Biochemistry and Behavior, 2020, 190: 172872.

Background

NBI-98782 is a potent and selective vesicular monoamine transporter 2 (VMAT2) inhibitor with a K_i value of 3nM [1]. NBI-98782 reduces the packaging of monoamines by targeting VMAT2, thereby leading to a decrease in monoamine release and neural transmission[2]. NBI-98782 has been widely used to promote ptosis in rats, stimulate prolactin secretion, and regulate neural functions[3].

In vivo, NBI-98782 treatment via oral administration at a dose of 10mg/kg/day for 7 days significantly decreased basal levels of dopamine and serotonin, and enhanced the release of acetylcholine and GABA levels in mice [4].

References:

[1] Meyer J M. Valbenazine for tardive dyskinesia[J]. Curr Psychiatr, 2017, 16(5): 40-46.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

[2] Terry-Lorenzo R, Albrecht D, Crouch S, et al. Quantifying VMAT2 target occupancy at effective valbenazine doses and comparing to a novel VMAT2 inhibitor: a translational PET study[J].

Neuropsychopharmacology, 2025, 50(7): 1093-1101.

[3] Grigoriadis D E, Smith E, Hoare S R J, et al. Pharmacologic characterization of valbenazine (NBI-98854) and its metabolites[J]. The Journal of Pharmacology and Experimental Therapeutics, 2017, 361(3): 454-461.

[4] Huang M, He W, Rajagopal L, et al. Effects of NBI-98782, a selective vesicular monoamine transporter 2 (VMAT2) inhibitor, on neurotransmitter efflux and phencyclidine-induced locomotor activity: Relevance to tardive dyskinesia and antipsychotic action[J]. Pharmacology Biochemistry and Behavior, 2020, 190: 172872.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA