# **PRODUCT** INFORMATION



## **NBI 98782**

Item No. 42116

CAS Registry No.:	85081-18-1	$\sim$
Formal Name:	(2R)-1,3R,4,6,7,11bR-hexahydro-9,10-	
	dimethoxy-3-(2-methylpropyl)-2H-	$\sim$
	benzo[a]quinolizin-2-ol	
Synonyms:	$\alpha$ -Dihydrotetrabenazine, $\alpha$ -DTBZ	
MF:	C <sub>19</sub> H <sub>29</sub> NO <sub>3</sub>	С. ОН
FW:	319.4	´    H
Purity:	≥98%	
Supplied as:	A solid	`O´ \
Storage:	-20°C	
Stability:	≥4 years	

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

#### Laboratory Procedures

NBI 98782 is supplied as a solid. A stock solution may be made by dissolving the NBI 98782 in the solvent of choice, which should be purged with an inert gas. NBI 98782 is sparingly soluble (1-10 mg/ml) in ethanol and DMSO.

#### Description

NBI 98782 is an inhibitor of vesicular monoamine transport 2 (VMAT2;  $K_i = 3.96$  nM) and an active metabolite of tetrabenazine (Item No. 20380) and valbenazine (Item No. 26809).<sup>1</sup> It is selective for VMAT2 over a panel of 80 receptors at 10  $\mu$ M.<sup>2</sup> NBI 98782 (10 mg/kg) decreases dopamine, serotonin (5-HT), and norepinephrine levels and increases 3,4-dihydroxyphenylacetic acid (DOPAC), homovanillic acid (HVA), and 5-hydroxyindoleacetic acid (5-HIAA) levels in the mouse medial prefrontal cortex.<sup>3</sup> It induces ptosis and increases serum prolactin levels in rats when administered at a dose of 10 mg/kg.<sup>2</sup> NBI 98782 (10 mg/kg) inhibits PCP- and amphetamine-induced hyperactivity in mice.

#### References

- 1. Yao, Z., Wei, X., Wu, X., et al. Preparation and evaluation of tetrabenazine enantiomers and all eight stereoisomers of dihydrotetrabenazine as VMAT2 inhibitors. Eur. J. Med. Chem. 46(5), 1841-1848 (2011).
- 2. Grigoriadis, D.E., Smith, E., Hoare, S.R.J., et al. Pharmacologic characterization of valbenazine (NBI-98854) and its metabolites. J. Pharmacol. Exp. Ther. 361(3), 454-461 (2017).
- 3. 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. Pharmacol. Biochem. Behav. 190:172872, (2020).

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

#### SAFFTY 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.

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