Monoamine Transporter

Monoamine transporters (MATs) belong to the solute carrier 6 (SLC6) family of human transporters, which, in turn, is a subfamily of the broader neurotransmitter:sodium symporters (NSSs) that comprise transporters from prokaryotic to human. MATs comprise three main members-the dopamine (DA) transporter (DAT), serotonin transporter (SERT) and norepinephrine transporter (NET). MATs regulate neurotransmission via the reuptake of dopamine, serotonin and norepinephrine from extra-neuronal regions and thus maintain neurotransmitter homeostasis.

MATs are transmembrane proteins located in plasma membranes of monoaminergic neurons. These proteins use ion (Na^+, Cl^-) gradients as energy sources to move monoamines into or out of neurons. In the membrane of intracellular synaptic vesicles is the vesicular monoamine transporters 1 and 2 (VMAT1 and VMAT2), which use a proton gradient as the energy source to sequester cytosolic monoamines into the vesicles and then release the monoamines into synaptic cleft by exocytosis. Dysregulation of MATs has been linked to depression, anxiety disorder, attention-deficit-hyperactivity disorder, obsessive-compulsive disorder, substance-use disorders, epilepsy, Parkinson's disease and autism-spectrum disorder. Thus, MATs serve as pharmacological targets for several neuropsychiatric and neurodegenerative disorders.

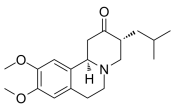
Monoamine Transporter Inhibitors

(+)-Tetrabenazine

((+)-TBZ; (3R,11bR)-TBZ; (3R,11bR)-Tetrabenazine)

Cat. No.: HY-B0590B

(+)-Tetrabenazine ((+)-TBZ; (3R,11bR)-TBZ; (3R,11bR)-Tetrabenazine) is a reversible inhibitor of vesicular monoamine transporter 2 (VMAT-2), inhibits transport by VMAT2 with 10-fold greater potency than transport by VMAT1.

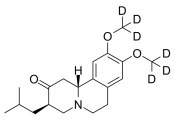


Purity: 99.95%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

(+)-Tetrabenazine D6

Cat. No.: HY-B0590S1

(+)-Tetrabenazine D6 is the deuterium labeled (+)-Tetrabenazine. (+)-Tetrabenazine is a reversible inhibitor of **vesicular monoamine transporter 2 (VMAT-2)**.



Absolute stereochemistry

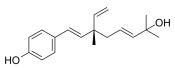
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

13-Hydroxyisobakuchiol

(Delta3,2-Hydroxylbakuchiol)

Cat. No.: HY-N7506

Hydroxyisobakuchiol (Delta3,2-Hydroxylbakuchiol), an analog of Bakuchiol (HY-N0235) isolated from Psoralea corylifolia (L.), is a potent **monoamine transporter** inhibitor.

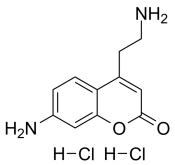


Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg

FFN200 dihydrochloride

Cat. No.: HY-131006

FFN200 dihydrochloride, a fluorescent substrate of **VMAT2**, selectively trace monoamine exocytosis in both neuronal cell culture and brain tissue. The fluorescence excitation and emission maxima of FFN200 are determined to be 352 and 451 nm, respectively.

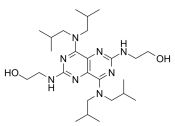


Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg

hENT4-IN-1

Cat. No.: HY-110165

hENT4-IN-1 is a potent and selective human **ENT4** (equilibrative nucleoside transporter 4) inhibitor with an IC_{50} of 74.4 nM.



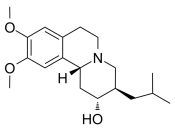
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

NBI-98782

((+)-DTBZ; (+)-α-Dihydrotetrabenazine; (+)-α-DHTBZ)

Cat. No.: HY-15793

NBI-98782(alpha-dihydrotetrabenazine) is a vesicular monoamine transporter (VMAT2) inhibtior with an Ki value of 0.97 nM.

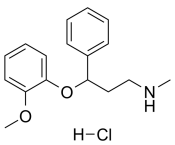


Purity: 98.73%
Clinical Data: Phase 1
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Nisoxetine hydrochloride

Cat. No.: HY-B1704A

Nisoxetine hydrochloride is a potent and selective inhibitor of **noradrenaline transporter (NET)**, with a K_d of 0.76 nM. Nisoxetine hydrochloride is an antidepressant and local anesthetic, it can block voltage-gated **sodium channels**.



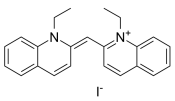
Purity: ≥98.0%
Clinical Data: No Development Reported
Size: 5 mg

Pseudoisocyanine iodide

(1,1'-Diethyl-2,2'-cyanine iodide; Decynium 22; Diethylcyanine iodide; Eastman 7851)

Cat. No.: HY-107740

Pseudoisocyanine (iodide) is a pan inhibitor of monoamine transporters and organic cation transporters with antidepressant-like activity.



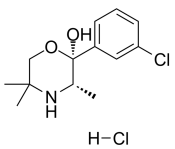
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Radafaxine hydrochloride

(GW-353162A; BW-306U)

Cat. No.: HY-17590

Radafaxine hydrochloride (GW-353162A) is a **DAT (dopamine transporter)** and **NET(norepinephrine transporter)** transporters inhibitor, and nAChR family modulator.

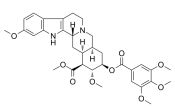


Purity: 99.88%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 5 mg, 10 mg

Reserpine

Cat. No.: HY-N0480

Reserpine is an inhibitor of the **vesicular monoamine transporter 2** (**VMAT2**).



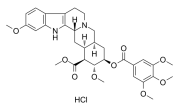
Purity: 99.83%
Clinical Data: Launched
Size: 10 mM × 1 mL, 100 mg

Tel: 609-228-6898 Fax: 609-228-5909 Email: sales@MedChemExpress.com

Reserpine hydrochloride

Cat. No.: HY-N0480A

Reserpine hydrochloride is an inhibitor of the **vesicular monoamine transporter 2** (**VMAT2**).

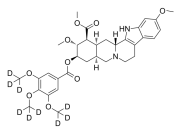


Purity: 99.90%
Clinical Data: Launched
Size: 10 mM × 1 mL, 100 mg

Reserpine-d9

Cat. No.: HY-N0480S

Reserpine-d9 is the deuterium labeled Reserpine. Reserpine is an inhibitor of the **vesicular monoamine transporter 2** (**VMAT2**).



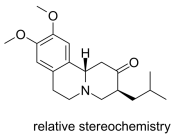
Purity: >98%
Clinical Data: No Development Reported
Size: 2.5 mg, 25 mg

Tetrabenazine

(Ro 1-9569)

Cat. No.: HY-B0590

Tetrabenazine is a VMAT-inhibitor used for treatment of hyperkinetic movement disorder. Target: Others tetrabenazine (TBZ), a monoamine-depleting and a dopamine-receptor-blocking drug.



relative stereochemistry

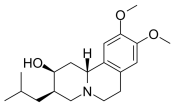
Purity: ≥98.0%
Clinical Data: Launched
Size: 10 mM × 1 mL, 100 mg, 200 mg, 500 mg

Tetrabenazine Metabolite

((-)-β-Dihydrotetrabenazine; (-)-β-HTBZ)

Cat. No.: HY-G0025

Tetrabenazine Metabolite is an active metabolite of Tetrabenazine. Tetrabenazine Metabolite is a vesicular monoamine transporter 2 (**VMAT2**) inhibitor with a high affinity (K_i=13.4 nM).



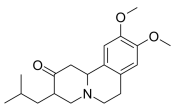
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Tetrabenazine Racemate

(Ro 1-9569 Racemate)

Cat. No.: HY-B0590A

Tetrabenazine Racemate (Ro 1-9569 Racemate) is a selective and reversible inhibitor of vesicular monoamine transporter-2 (VMAT-2).



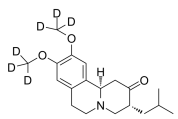
Purity: ≥98.0%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 25 mg, 50 mg, 100 mg

Tetrabenazine-d6

(Ro 1-9569-d6)

Cat. No.: HY-B0590S

Tetrabenazine D6 is the deuterium labeled Tetrabenazine, which is a VMAT-inhibitor used for treatment of hyperkinetic movement disorder.



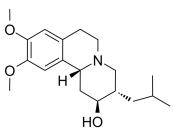
Purity: 98.30%
Clinical Data: Launched
Size: 10 mM × 1 mL, 500 µg, 1 mg, 5 mg, 10 mg, 25 mg, 50 mg

Trans (2,3)-Dihydrotetrabenazine

((2R,3R,11bR)-rel-Dihydrotetrabenazine; ...)

Cat. No.: HY-15793A

Trans (2,3)-Dihydrotetrabenazine ((2R,3R,11bR)-rel-Dihydrotetrabenazine), a metabolite of Tetrabenazine, shows remarkable inhibition activity on **vesicular monoamine transporter (VMAT2)**.



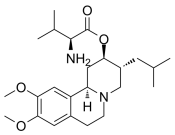
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Valbenazine

(NBI-98854)

Cat. No.: HY-16771

Valbenazine (NBI-98854) is a vesicular monoamine transporter 2 (**VMAT2**) inhibitor with the K_i of 110-190 nM.



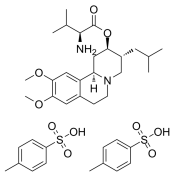
Purity: 98.91%
Clinical Data: Launched
Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Valbenazine tosylate

(NBI-98854 tosylate)

Cat. No.: HY-16771A

Valbenazine tosylate (NBI-98854 tosylate) is a vesicular monoamine transporter 2 (**VMAT2**) inhibitor with the K_i of 110-190 nM.



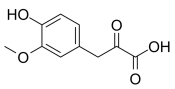
Purity: >98%
Clinical Data: Launched
Size: 1 mg, 5 mg

Vanilpyruvic acid

(Vanylpyruvic acid)

Cat. No.: HY-101416

Vanilpyruvic acid is a catecholamine metabolite and precursor to vanillactic acid.



Purity: 98.28%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg