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Inhibitors, Agonists, Screening Libraries

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.

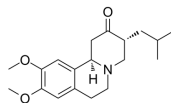
Monoamine Transporter Inhibitors

(+)-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.

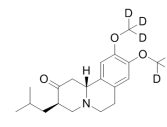


Purity: 95.64%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

(+)-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

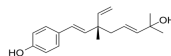
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

13-Hydroxyisobakuchiol

(Delta3,2-Hydroxybakuchiol)

Cat. No.: HY-N7506

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

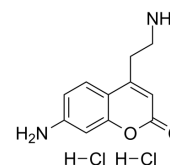


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

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.



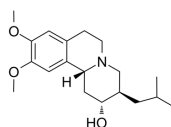
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

NBI-98782

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

Cat. No.: HY-15793

NBI-98782(α-dihydrotetrabenazine) is a vesicular monoamine transporter (VMAT2) inhibitor with an K_i value of 0.97 nM.

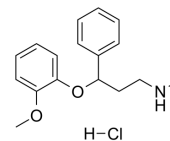


Purity: 99.80%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

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.



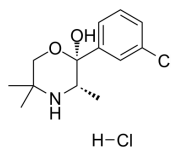
Purity: ≥98.0%
Clinical Data: No Development Reported
Size: 5 mg

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.

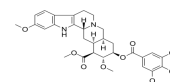


Purity: 99.88%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 5 mg, 10 mg

Reserpine

Cat. No.: HY-N0480

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

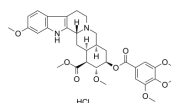


Purity: 99.83%
Clinical Data: Launched
Size: 10 mM × 1 mL, 100 mg

Reserpine hydrochloride

Cat. No.: HY-N0480A

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



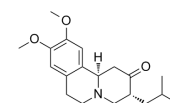
Purity: 99.65%
Clinical Data: Launched
Size: 10 mM × 1 mL, 100 mg

Tetrabenazine

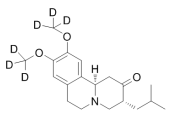
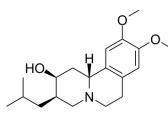
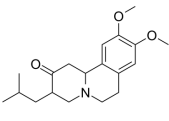
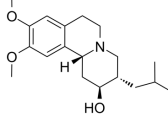
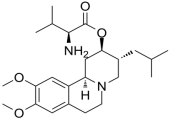
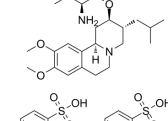
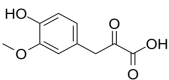
(Ro 1-9569)

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.



Purity: ≥99.0%
Clinical Data: Launched
Size: 10 mM × 1 mL, 100 mg, 200 mg, 500 mg

<p>Tetrabenazine D6 (Ro 1-9569 D6) Cat. No.: HY-B0590S</p>	<p>Tetrabenazine Metabolite (-)-β-Dihydrotetrabenazine; (-)-β-HTBZ Cat. No.: HY-G0025</p>
<p>Tetrabenazine D6 is the deuterium labeled Tetrabenazine, which is a VMAT-inhibitor used for treatment of hyperkinetic movement disorder.</p> <p style="text-align: center;"></p> <p>Purity: 98.30% Clinical Data: No Development Reported Size: 10 mM \times 1 mL, 500 μg, 1 mg, 5 mg, 10 mg, 25 mg, 50 mg</p>	<p>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).</p> <p style="text-align: center;"></p> <p>Purity: >98% Clinical Data: No Development Reported Size: 1 mg, 5 mg</p>
<p>Tetrabenazine Racemate (Ro 1-9569 Racemate) Cat. No.: HY-B0590A</p>	<p>Trans (2,3)-Dihydrotetrabenazine ((2R,3R,11bR)-rel-Dihydrotetrabenazine; ...) Cat. No.: HY-15793A</p>
<p>Tetrabenazine Racemate (Ro 1-9569 Racemate) is a selective and reversible inhibitor of vesicular monoamine transporter-2 (VMAT-2).</p> <p style="text-align: center;"></p> <p>Purity: \geq98.0% Clinical Data: No Development Reported Size: 10 mM \times 1 mL, 10 mg, 25 mg, 50 mg, 100 mg</p>	<p>Trans (2,3)-Dihydrotetrabenazine ((2R,3R,11bR)-rel-Dihydrotetrabenazine), a metabolite of Tetrabenazine, shows remarkable inhibition activity on vesicular monoamine transporter (VMAT2).</p> <p style="text-align: center;"></p> <p>Purity: >98% Clinical Data: No Development Reported Size: 1 mg, 5 mg</p>
<p>Valbenazine (NBI-98854) Cat. No.: HY-16771</p>	<p>Valbenazine tosylate (NBI-98854 tosylate) Cat. No.: HY-16771A</p>
<p>Valbenazine (NBI-98854) is a vesicular monoamine transporter 2 (VMAT2) inhibitor with the K_i of 110-190 nM.</p> <p style="text-align: center;"></p> <p>Purity: 99.03% Clinical Data: Launched Size: 10 mM \times 1 mL, 2 mg, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg</p>	<p>Valbenazine tosylate (NBI-98854 tosylate) is a vesicular monoamine transporter 2 (VMAT2) inhibitor with the K_i of 110-190 nM.</p> <p style="text-align: center;"></p> <p>Purity: >98% Clinical Data: Launched Size: 1 mg, 5 mg</p>
<p>Vanilpyruvic acid (Vanylpyruvic acid) Cat. No.: HY-101416</p>	
<p>Vanilpyruvic acid is a catecholamine metabolite and precursor to vanillic acid.</p> <p style="text-align: center;"></p> <p>Purity: 98.28% Clinical Data: No Development Reported Size: 10 mM \times 1 mL, 10 mg</p>	