Dopamine Transporter

DAT; SLC6A3

Dopamine Transporter (DAT) is an integral membrane protein that removes dopamine from the synaptic cleft and deposits it into surrounding cells, thus terminating the signal of the neurotransmitter. Dopamine transporter (DAT) controls the spatial and temporal dynamics of dopamine (DA) neurotransmission by driving reuptake of extracellular transmitter into presynaptic neurons. Many diseases such as depression, bipolar disorder, Parkinson’s disease, and attention deficit hyperactivity disorder are associated with abnormal DA levels, implicating DAT as a factor in their etiology. Medications used to treat these disorders and many addictive drugs target DAT and enhance dopaminergic signaling by suppressing transmitter reuptake. DAT is regulated by multiple signaling systems, with PKC and ERK being two of the most well-characterized.
### Dopamine Transporter Inhibitors

**Amitifadine Hydrochloride (DOV-21947 Hydrochloride; EB-1010 Hydrochloride)**  
Cat. No.: HY-18332A  
Amitifadine hydrochloride is a serotonin-norepinephrine-dopamine reuptake inhibitor (SNDRD), with IC₅₀ values of 12, 23, 36 nM for serotonin, norepinephrine and dopamine in HEK 293 cells, respectively.  
Purity: 99.92%  
Clinical Data: Phase 3  
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

**Centanafadine Hydrochloride (EB-1020)**  
Cat. No.: HY-16736A  
Centanafadine is dual norepinephrine (NE)/dopamine (DA) transporter inhibitor, also inhibits serotonin transporter, with IC₅₀ values of 6 nM, 38 nM and 83 nM for human NE, DA and serotonin transporter, respectively.  
Purity: >98%  
Clinical Data: No Development Reported  
Size: 100 mg, 250 mg, 500 mg

**Centanafadine Hydrochloride (SEP-225289)**  
Cat. No.: HY-12850A  
Centanafadine hydrochloride (EB-1020 hydrochloride) is dual transporter norepinephrine (NE)/dopamine (DA) inhibitor, also inhibits serotonin transporter, with IC₅₀ values of 6 nM, 38 nM and 83 nM for human NE, DA and serotonin transporter, respectively.  
Purity: >98%  
Clinical Data: No Development Reported  
Size: 100 mg, 250 mg, 500 mg

**Dasotraline Hydrochloride (SEP-225289 Hydrochloride)**  
Cat. No.: HY-12850  
Dasotraline is a triple reuptake inhibitor that blocks noradrenaline, dopamine and serotonin transporters with IC₅₀ values of 4, 6, and 11 nM, respectively.  
Purity: 99.60%  
Clinical Data: Phase 3  
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 25 mg, 50 mg

**Desipramine Hydrochloride**  
Cat. No.: HY-B1272  
Desipramine hydrochloride is an inhibitor of norepinephrine transporter (NET), 5-HT transporter (SERT) and dopamine transporter (DAT) with Kᵦ values of 4, 61 and 78,720 nM, respectively.  
Purity: 99.68%  
Clinical Data: Launched  
Size: 10 mM × 1 mL, 100 mg, 500 mg

**Diclofensine (Ro 8-4650)**  
Cat. No.: HY-18610A  
Diclofensine (Ro-8-4650) is a potent inhibitor of monoamine reuptake, blocking the uptake of dopamine, noradrenaline, and serotonin by rat brain synaptosomes with IC₅₀ values of 0.74, 2.3, and 3.7 nM, respectively.  
Purity: >98%  
Clinical Data: No Development Reported  
Size: 1 mg, 5 mg

**Diclofensine Hydrochloride (Ro 8-4650 Hydrochloride)**  
Cat. No.: HY-18610  
Diclofensine hydrochloride (Ro-8-4650 hydrochloride) is a potent inhibitor of monoamine reuptake, blocking the uptake of dopamine, noradrenaline, and serotonin by rat brain synaptosomes with IC₅₀ values of 0.74, 2.3, and 3.7 nM, respectively.  
Purity: 96.44%  
Clinical Data: No Development Reported  
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

**DOV-216,303 Free Base**  
Cat. No.: HY-18332C  
DOV-216,303 (Free Base) is a potent triple serotonin, norepinephrine, and dopamine reuptake inhibitor, with IC₅₀ values of 14 nM, 20 nM and 78 nM for hSERT, hNET and hDAT, respectively.  
Purity: 98.47%  
Clinical Data: No Development Reported  
Size: 10 mM × 1 mL, 5 mg

**Fipexide**  
Cat. No.: HY-B1124  
Fipexide is a psychoactive drug of the piperazine chemical class, used as a nootropic drug, mainly for the treatment of senile dementia.  
Purity: 99.88%  
Clinical Data: No Development Reported  
Size: 10 mM × 1 mL, 100 mg
GBR 12935

Cat. No.: HY-12242A

GBR 12935 is a potent, and selective dopamine reuptake inhibitor. IC50 value: Target: dopamine reuptake inhibitor in vitro: The calculated Kd of [3H]GBR-12935 binding to CYP2D6 was 42.2 nM, indicating that GBR-12935 has a high affinity for CYP2D6.

Purity: >98%
Clinical Data: No Development Reported
Size: 10 mg, 50 mg, 100 mg

GBR 12935 dihydrochloride

Cat. No.: HY-12242

GBR 12935 dihydrochloride is a potent, and selective dopamine reuptake inhibitor. IC50 value: Target: dopamine reuptake inhibitor in vitro: The calculated Kd of [3H]GBR-12935 binding to CYP2D6 was 42.2 nM, indicating that GBR-12935 has a high affinity for CYP2D6.

Purity: 98.90%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg

Levophacetoperane hydrochloride

Cat. No.: HY-101631

Levophacetoperane inhibits in vitro in a competitive manner, norepinephrin uptake and dopamine uptake.

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

SPD-473 citrate

Cat. No.: HY-101612

SPD-473 citrate is a serotonin/dopamine/norepinephrine reuptake inhibitor.

Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg, 10 mg, 20 mg

Vanoxerine (GBR 12909; I893)

Cat. No.: HY-13217A

Vanoxerine (GBR-12909) is a competitive, potent, and highly selective dopamine reuptake inhibitor (K_i = 1 nM). Vanoxerine (GBR-12909) binds to the target site on the dopamine transporter (DAT).

Purity: >98%
Clinical Data: Phase 3
Size: 1 mg, 5 mg

Vanoxerine dihydrochloride (GBR-12909 dihydrochloride; I893 dihydrochloride)

Cat. No.: HY-13217

Vanoxerine dihydrochloride (GBR-12909 dihydrochloride) is a competitive, potent, and highly selective dopamine reuptake inhibitor (K_i = 1 nM). Vanoxerine dihydrochloride (GBR-12909 dihydrochloride) binds to the target site on the dopamine transporter (DAT).

Purity: 99.52%
Clinical Data: Phase 3
Size: 10 mM × 1 mL, 10 mg, 50 mg