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Inhibitors, Agonists, Screening Libraries

Dopamine β -hydroxylase

Dopamine beta-hydroxylase; Dopamine beta-monooxygenase; Dopamine β -monooxygenase

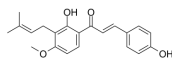
Dopamine β -hydroxylase (Dopamine beta-hydroxylase, Dopamine beta-monooxygenase) is an enzyme that in humans is encoded by the DBH gene. Dopamine β -monooxygenase catalyzes the chemical reaction with 3 substrates of 3,4-dihydroxyphenethylamine, ascorbate, and O_2 , whereas its 3 products are noradrenaline, dehydroascorbate, and H_2O . Dopamine β -hydroxylase belongs to the family of oxidoreductases, specifically those acting on paired donors, with O_2 as oxidant and incorporation or reduction of oxygen. Dopamine β -hydroxylase participates in tyrosine metabolism. Dopamine β -hydroxylase has 3 cofactors: copper, PQQ, and Fumarate. Dopamine β -hydroxylase is in the catecholamine biosynthetic pathway. Dopamine β -hydroxylase has been shown to be associated with decision making and addictive behaviors such as alcohol and smoking, attention deficit hyperactivity disorder, and also with neurological diseases such as Schizophrenia and Alzheimer's.

Dopamine β -hydroxylase Inhibitors

4-Hydroxyderricin

Cat. No.: HY-N7204

4-Hydroxyderricin, the major active ingredients of *Angelica keiskei* Koidzumi, is a potent selective MAO-B (Monoamine oxidase inhibitors) inhibitor with an IC_{50} of 3.43 μ M. 4-Hydroxyderricin also mildly inhibits DBH (dopamine β -hydroxylase) activity.



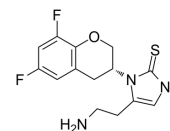
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Etamicastat

(BIA 5-453)

Cat. No.: HY-14838

Etamicastat (BIA 5-453) is a potent and reversible dopamine- β -hydroxylase (DBH) inhibitor with an IC_{50} value of 107 nM. Etamicastat can be used in the research of cardiovascular diseases.



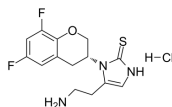
Purity: >98%
Clinical Data: Phase 1
Size: 1 mg, 5 mg

Etamicastat hydrochloride

(BIA 5-453 hydrochloride)

Cat. No.: HY-14838A

Etamicastat hydrochloride (BIA 5-453 hydrochloride) is a potent and reversible dopamine- β -hydroxylase (DBH) inhibitor with an IC_{50} value of 107 nM. Etamicastat can be used in the research of cardiovascular diseases.

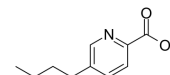


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Fusaric acid

Cat. No.: HY-128483

Fusaric acid is a potent dopamine β -hydroxylase inhibitor.



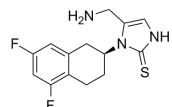
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Nepicastat

(SYN117; RS-25560-197)

Cat. No.: HY-13289

Nepicastat (SYN117) is a selective, potent, and orally active inhibitor of dopamine-beta-hydroxylase. Nepicastat (SYN117) produces concentration-dependent inhibition of bovine (IC_{50} =8.5 nM) and human (IC_{50} =9 nM) dopamine-beta-hydroxylase.



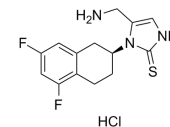
Purity: >98%
Clinical Data: Phase 2
Size: 1 mg, 5 mg

Nepicastat hydrochloride

(SYN-117 hydrochloride; RS-25560-197 hydrochloride)

Cat. No.: HY-13289A

Nepicastat hydrochloride (SYN-117 hydrochloride) is a selective, potent, and orally active inhibitor of dopamine-beta-hydroxylase.



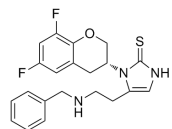
Purity: 99.98%
Clinical Data: Phase 2
Size: 10 mM \times 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Zamicastat

(BIA 5-1058)

Cat. No.: HY-106004

Zamicastat (BIA 5-1058) is a dopamine β -hydroxylase (DBH) inhibitor and can cross the blood-brain barrier (BBB) to cause central as well as peripheral effects.



Purity: 99.95%
Clinical Data: Phase 1
Size: 10 mM \times 1 mL, 5 mg, 10 mg, 50 mg, 100 mg