Arginase

Arginase (ARG) is an enzyme involved in urea cycle, where it catalyzes the hydrolysis of L-arginine into L-ornithine and urea. There are two distinct isoforms of arginase, arginase I and II, which are encoded by separate genes and display differences in tissue distribution, subcellular localization, and molecular regulation. Arginase activity has two major homeostatic purposes: first, to rid the body of ammonia through urea synthesis, and second, to produce ornithine, the precursor for polyamines and prolines. Polyamines produced through ornithine decarboxylase (ODC) are necessary for cell proliferation and regulation of several ion channels. Proline produced through ornithine aminotransferase (OAT) is necessary for production of collagen.

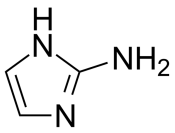
Arginase I is a cytosolic enzyme that is abundantly expressed in the liver and plays an essential role in hepatic urea cycle. In contrast, arginase II is a mitochondrial enzyme that is widely expressed outside the liver, most prominently in the kidney and prostate. Arginase functions important for protection against NH3 toxicity and cell growth and repair. Excessive arginase activity in mammals has been associated with cardiovascular and nervous system dysfunction and disease. Two relevant aspects of this elevated activity may be involved in these disease states. First, excessive arginase activity reduces the supply of L-arginine needed by nitric oxide (NO) synthase to produce NO. Second, excessive production of ornithine leads to vascular structural problems and neural toxicity. In addition, Arginase is a potential therapeutic target for the treatment of sexual arousal disorders in men and women.

Arginase Inhibitors

2-Aminoimidazole

Cat. No.: HY-W062216

2-Aminoimidazole is a potent antibiofilm agent that can be used as an adjuvant to antimicrobial. 2-aminoimidazoles disrupts the ability of bacteria to protect themselves by inhibiting biofilm formation and genetically-encoded antibiotic resistance traits.

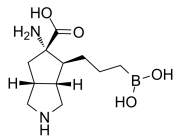


Purity: 97.67%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 250 mg

ARG1-IN-1

Cat. No.: HY-145331

ARG1-IN-1 is a human **arginase 1** inhibitor with an IC_{50} of 29 nM.

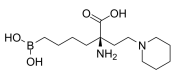


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Arginase inhibitor 1

Cat. No.: HY-15775

Arginase inhibitor 1 is a potent inhibitor of human **arginases I** and **II** with IC_{50}s of 223 and 509 nM, respectively.

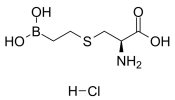


Purity: 98.0%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

BEC hydrochloride

Cat. No.: HY-19548A

BEC hydrochloride is a slow-binding and competitive **Arginase II** inhibitor with K_i of 0.31 μM and 30 nM at pH 7.5 and pH 9.5, respectively.



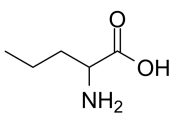
Purity: ≥98.0%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg

DL-Norvaline

(2-Aminopentanoic acid)

Cat. No.: HY-W010510

DL-Norvaline, a derivative of **L-norvaline**, L-norvaline is a non-competitive inhibitor of arginase.

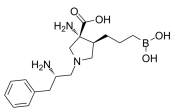


Purity: ≥97.0%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 500 mg, 5 g

NED-3238

Cat. No.: HY-126332

NED-3238 is a highly potent **arginase I and II** inhibitor with IC_{50} values of 1.3 nM and 8.1 nM, respectively.



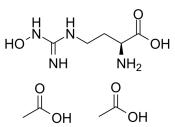
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

nor-NOHA acetate

(Nω-Hydroxy-nor-L-arginine acetate)

Cat. No.: HY-112885A

nor-NOHA acetate (Nω-Hydroxy-nor-L-arginine acetate) is a specific and reversible **arginase** inhibitor, induces apoptosis in ARG2-expressing cells under hypoxia but not normoxia. Anti-leukemic activity, effective in endothelial dysfunction, immunosuppression and metabolism.



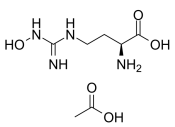
Purity: ≥98.0%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg

nor-NOHA monoacetate

(Nω-Hydroxy-nor-L-arginine monoacetate)

Cat. No.: HY-112885B

nor-NOHA (Nω-Hydroxy-nor-L-arginine) monoacetate is a potent and selective **arginase** inhibitor. nor-NOHA monoacetate inhibits rat liver arginase with a K_i of 0.5 μM.



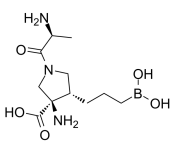
Purity: 99.96%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Numidargistat

(CB-1158; INCB01158)

Cat. No.: HY-101979

Numidargistat (CB-1158) is a potent and orally active inhibitor of **arginase**, with IC_{50}s of 86 nM and 296 nM for **recombinant human arginase 1** and **recombinant human arginase 2**, respectively. Immuno-oncology agent.



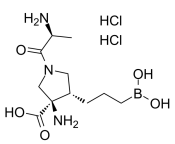
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Numidargistat dihydrochloride

(CB-1158 dihydrochloride; INCB01158 dihydrochloride)

Cat. No.: HY-101979A

Numidargistat (CB-1158) dihydrochloride is a potent and orally active inhibitor of **arginase**, with IC_{50}s of 86 nM and 296 nM for **recombinant human arginase 1** and **recombinant human arginase 2**, respectively. Immuno-oncology agent.



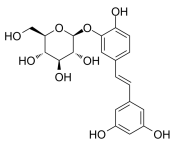
Purity: 99.81%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

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

Piceatannol 3'-O-glucoside

(Quzhaqigan) **Cat. No.:** HY-N2237

Piceatannol 3'-O-glucoside, an active component of Rhubarb, activates endothelial **nitric oxide** (**NO**) **synthase** through inhibition of arginase activity with **IC_{50}**s of 11.22 μM and 11.06 μM against **arginase I** and **arginase II**, respectively.



Purity: 99.74%
Clinical Data: No Development Reported
Size: 1 mg