Arginase

Arginase, an enzyme within the urea cycle in the liver, is also found in many other cells and tissues, including the lung. Arginase is present in 2 isoforms: arginase I, the hepatic isoform; and arginase II, the extrahepatic isoform; each of which is encoded by a distinct gene.

The expression and function of arginase I in macrophages, hepatocytes, and vascular smooth muscle cells, is stimulated by lipopolysaccharide (LPS), IL-13, altered oxygen tension, and balloon dilatation of coronary arteries. The activation and expression of endothelial arginase II can also be induced by a variety of vascular insults.

Arginase competitively inhibits nitric oxide synthase (NOS) via use of the common substrate L-arginine. Inhibition of arginase activity enhances a variety of parameters relevant to allergic airways disease, possibly by altering NO homeostasis. Arginase inhibition actively augments NO production and has beneficial effects on normal cardiac function and on vascular dysfunction typical of atherogenesis, aging, and erectile dysfunction, and sickle cell disease.
### Arginase Inhibitors

#### Arginase inhibitor 1
- **Cat. No.: HY-15775**
- **Purity:** >98.0%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Arginase inhibitor 1 is a potent inhibitor of human arginases I and II with IC₅₀ values of 223 and 509 nM, respectively.

#### BEC hydrochloride
- **Cat. No.: HY-19548A**
- **Purity:** >98.0%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg

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

#### CB-1158 (INCB01158)
- **Cat. No.: HY-101979**
- **Purity:** >98%
- **Clinical Data:** No Development Reported
- **Size:** 1 mg, 5 mg

CB-1158 (INCB01158) is a potent and orally active inhibitor of arginase, with IC₅₀ values of 86 nM and 296 nM for recombinant human arginase 1 and recombinant human arginase 2, respectively. Immuno-oncology agent.

#### CB-1158 dihydrochloride (INCB01158 dihydrochloride)
- **Cat. No.: HY-101979A**
- **Purity:** >98.0%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 5 mg, 10 mg

CB-1158 dihydrochloride (INCB01158 dihydrochloride) is a potent and orally active inhibitor of arginase, with IC₅₀ values of 86 nM and 296 nM for recombinant human arginase 1 and recombinant human arginase 2, respectively. Immuno-oncology agent.

#### DL-Norvaline (2-Aminopentanoic acid)
- **Cat. No.: HY-W010510**
- **Purity:** >97.0%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 500 mg, 5 g

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

#### nor-NOHA acetate (Nu-Hydroxy-nor-L-arginine acetate)
- **Cat. No.: HY-112885A**
- **Purity:** >99.0%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 5 mg, 10 mg

nor-NOHA acetate (Nu-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.

#### nor-NOHA monoacetate (Nω-Hydroxy-nor-L-arginine monoacetate)
- **Cat. No.: HY-112885B**
- **Purity:** >98%
- **Clinical Data:** No Development Reported
- **Size:** 1 mg, 5 mg

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

#### Piceatannol 3’-O-glucoside (Quzhaqigan)
- **Cat. No.: HY-N2237**
- **Purity:** >99.0%
- **Clinical Data:** No Development Reported
- **Size:** 1 mg

Piceatannol 3’-O-glucoside, an active component of Rhubarb, activates endothelial nitric oxide (NO) synthase through inhibition of arginase activity with IC₅₀ values of 11.22 μM and 11.06 μM against arginase I and arginase II, respectively.