

---

**Product Data Sheet**

---

Product Name: Methyl-L-NIO (hydrochloride)

Cat. No.: GC15360

**Chemical Properties**

Cas. No. 150403-96-6

Chemical Name N<sup>5</sup>-(1-iminopropyl)-L-ornithine, monohydrochlorideSMILES CCC(NCCC[C@H](N)C(O)=O)=N.ClFormula C<sub>8</sub>H<sub>17</sub>N<sub>3</sub>O<sub>2</sub> • HCl M.Wt 223.7

Solubility ≤10mg/ml in PBS Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure **Background**

Ki: 3.0 μM for nNOS; 10.0 μM for eNOS; 9.5 μM for iNOS

Methyl-L-NIO is a competitive nitric oxide synthase (NOS) inhibitor.

Nitric oxide synthase (NOS) catalyzes the NADPH- and O<sub>2</sub>-dependent conversion of L-arginine to nitric oxide (NO). Three isoforms, the neuronal (nNOS), endothelial, and inducible, have been identified. Since NO overproduction contributes to various pathophysiological conditions, NOS inhibitors are considered as potential therapeutic agents.

In vitro: Previous study found that both methyl-L-NIO and its close analog ethyl-L-NIO were more potent inhibitors of nNOS than of eNOS or iNOS. However, expressed on a Ki/Km basis, neither of these two inhibitors showed biologically significant selectivity for nNOS over eNOS. In fact, both compounds showed a very modest selectivity for iNOS over the constitutive isoforms. In addition, methyl-L-NIO required a 10-fold higher

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

---

## Product Data Sheet

---

concentration to duplicate the inactivation seen with L-NIO. Further extension to form the saturated analog of L-VNIO such as ethyl-L-NIO led to an inactivation of nNOS under the conditions examined [1].

In vivo: Up to now, there is no animal in vivo data reported.

Clinical trial: So far, no clinical study has been conducted.

Reference:

[1] Babu, B. R., and Griffith, O.W. N5-(1-Imino-3-butenyl)-L-ornithine. A neuronal isoform selective mechanism-based inactivator of nitric oxide synthase. *The Journal of Biological Chemistry* 273, 8882-8889 (1998).

**Caution: Product has not been fully validated for medical applications. For research use only.**

**Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com**

**Address: 10292 Central Ave. #205, Montclair, CA, USA**