

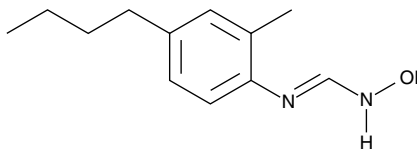
Product Information



HET0016

Item No. 75780

CAS Registry No.: 339068-25-6
Formal Name: N-(4-butyl-2-methylphenyl)-N'-hydroxymethanimidamide
Synonym: N-hydroxy-N'-(4-n-butyl-2-methylphenyl)Formamidine
MF: C₁₂H₁₈N₂O
FW: 206.3
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 210, 257, 291 nm



Laboratory Procedures

For long term storage, we suggest that HET0016 be stored as supplied at -20°C. It should be stable for at least two years.

HET0016 is supplied as a crystalline solid. A stock solution may be made by dissolving the HET0016 in an organic solvent purged with an inert gas. HET0016 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of HET0016 in these solvents is approximately 14 mg/ml.

HET0016 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, HET0016 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. HET0016 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

20-HETE is a major biologically active cytochrome P450 (CYP450) metabolite of arachidonic acid in the kidney and liver. It regulates renal vascular and tubular functions as well as vascular tone in the cerebral circulation.¹⁻⁵ HET0016 is an inhibitor of 20-HETE formation in human renal microsomes with an IC₅₀ of 8.9 nM, selectively inhibiting CYP4A and 4F isoforms.^{6,7} HET0016 inhibits CYP2C9, CYP2D6, and CYP3A4, enzymes important in drug metabolism, significantly less effectively with IC₅₀ values in the μM range. The IC₅₀ values for inhibition of cyclooxygenase and epoxyeicosatrienoic acids (EETs) formation are 2.3 and 2.8 μM, respectively.⁶

References

1. Omata, K., Abraham, N.G., and Schwartzman, M.L. Renal cytochrome P-450-arachidonic acid metabolism: Localization and hormonal regulation in SHR. *Am. J. Physiol. Renal Fluid Electrolyte Physiol.* **262**, F591-F599 (1992).
2. Zou, A.-P., Imig, J.D., Kaldunski, M., *et al.* Inhibition of renal vascular 20-HETE production impairs autoregulation of renal blood flow. *Am. J. Physiol. Renal Fluid Electrolyte Physiol.* **35**, F275-F282 (1994).
3. Lin, F., Rios, A., Falck, J.R., *et al.* 20-Hydroxyeicosatetraenoic acid is formed in response to EGF and is a mitogen in rat proximal tubule. *Am. J. Physiol. Renal Fluid Electrolyte Physiol.* **38**, F806-F816 (1995).
4. Imig, J.D., Zou, A.-P., de Montellano, P.R.O., *et al.* Cytochrome P-450 inhibitors alter afferent arteriolar responses to elevations in pressure. *Am. J. Physiol. Heart Circ. Physiol.* **35**, H1879-H1885 (1994).
5. Gebremedhin, D., Lange, A.R., Lowry, T.F., *et al.* Production of 20-HETE and its role in autoregulation of cerebral blood flow. *Circ. Res.* **87**, 60-65 (2000).
6. Miyata, N., Taniguchi, K., Seki, T., *et al.* HET0016, a potent and selective inhibitor of 20-HETE synthesizing enzyme. *Br. J. Pharmacol.* **133**, 325-329 (2001).
7. Kehl, F., Cambj-Sapunar, L., Maier, K., *et al.* 20-HETE contributes to the acute fall in cerebral blood flow after subarachnoid hemorrhage in the rat. *Am. J. Physiol. Heart Circ. Physiol.* **282**, H1556-H1565 (2002).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/75780

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery.**

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a **refund** of the purchase price, or at Cayman's option, the **replacement**, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our **Warranty and Limitation of Remedy located on our website and in our catalog.**

Copyright Cayman Chemical Company, 06/19/2011

Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com