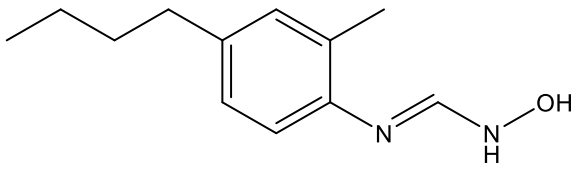
Catalog # 10-5246

HET0016

CAS# 339068-25-6

N-Hydroxy-N'-(4-butyl-2-methylphenyl)formamidine

Lot # R102572



Inhibits 20-hydroxyeicosatetraenoic acid (20-HETE) biosynthesis via omega oxidation of arachidonic acid mediated by CYP4A and 4F (IC_{50}=8.9 nM in human renal microsomes).[1] It displays neuroprotective effects in a rat model of traumatic brain injury *via* inhibition of neuronal pyroptosis.[2] HET0016 attenuates cerebral ischemia-reperfusion injury[3] as well as oxidative injury and peripheral nerve damage in type-2 diabetic mice[4]. It alleviates myocardial oxidative stress[5] and restores endothelial function suggesting therapeutic potential in obesity-associated vascular disease[6].

1) Miyata *et al*. (2001), *HET0016, a potent and selective inhibitor of 20-HETE synthesizing enzyme*; Br. J. Pharmacol. **133** 325
2) Chen *et al.* (2023), *HET0016 inhibits neuronal pyroptosis in the immature brain post-TBI via the p38 MAPK signaling pathway*; Neuropharmacology, **239** 109687
3) Yang *et al.* (2020), *N-hydroxy-N'-(4-butyl-2-methylphenyl)-formamidine attenuates oxygen-glucose deprivation and reoxygenation-induced cerebral ischemia-reperfusion injury via regulation of microRNAs*; J. Integr. Neuroscience **19** 303
4) Haddad *et al.* (2022), *Activation of 20-HETE Synthase Triggers Oxidative Injury and Peripheral Nerve Damage in Type 2 Diabetic Mice*; J. Pain **23** 1371
5) Wang *et al.* (2019), *Specific Inhibition of CYP4A Alleviates Myocardial Oxidative Stress and Apoptosis Induced by Advanced Glycation End-Products*; Front. Pharmacol. **10** 876
6) Munoz *et al.* (2022), *Differential contribution of renal cytochrome P450 enzymes to kidney endothelial dysfunction and vascular oxidative stress in obesity*; Biochem. Pharmacol. **195** 114850

PHYSICAL DATA

Molecular Weight:	206.29
Molecular Formula:	$C_{12}H_{18}N_2O$
Purity:	>98% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (20 mg/ml)
Physical Description:	Off-white solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 2 years from the date of purchase.
	Solutions in DMSO may be stored at -20°C for up to 3 months.

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