



LKT Laboratories, Inc.

Monastrol

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Product Information

Product ID M5752

CAS No. 254753-54-3

Chemical Name 1,2,3,4-Tetra- hydro-4-(3-Hydroxyphenyl)- 6-methyl-2-thioxo-5-pyrimidinecarboxylic acid ethyl ester

Synonym

Formula C₁₄H₁₆N₂O₃S

Formula Wt. 292.35

Melting Point 184-186°C (lit.)

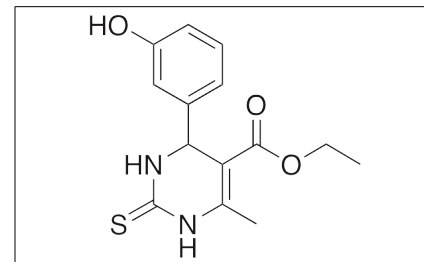
Purity ≥95%

Solubility Soluble in DMSO
(100mg/mL).

Store Temp 4°C

Ship Temp Ambient

Description Monastrol is a pyrimidine derivative inhibitor of kinesin Eg5 that inhibits ATPase activity and bipolar spindle formation. Monastrol exhibits anticancer activity, activating the spindle checkpoint but also inducing mitotic arrest and apoptosis in HeLa cells. Monastrol also induces dendrite growth and axonal shortening in neurons.



Bulk quantities available upon request

Product ID	Size
M5752	1 mg
M5752	5 mg

References Chin GM, Herbst R. Induction of apoptosis by monastrol, an inhibitor of the mitotic kinesin Eg5, is independent of the spindle checkpoint. *Mol Cancer Ther.* 2006 Oct;5(10):2580-91. PMID: 17041103.

Maliga Z, Mitchison TJ. Small-molecule and mutational analysis of allosteric Eg5 inhibition by monastrol. *BMC Chem Biol.* 2006 Feb 27;6:2. PMID: 16504166.

Yoon SY, Choi JE, Huh JW, et al. Monastrol, a selective inhibitor of the mitotic kinesin Eg5, induces a distinctive growth profile of dendrites and axons in primary cortical neuron cultures. *Cell Motil Cytoskeleton.* 2005 Apr;60(4):181-90. PMID: 15751098.

Maliga Z, Kapoor TM, Mitchison TJ. Evidence that monastrol is an allosteric inhibitor of the mitotic kinesin Eg5. *Chem Biol.* 2002 Sep;9(9):989-96. PMID: 12323373.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.