

Product Name	: Monastrol
Synonyms	: $\pm$ -Monastrol
Cat No.	: M14088
CAS Number	: 329689-23-8
Molecular Formula	: C ₁₄ H ₁₆ N ₂ O ₃ S
Formula Weight	: 292.35
Chemical Name	: 5-Pyrimidinecarboxylic acid, 1,2,3,4-tetrahydro-4-(3-hydroxyphenyl)-6-methyl-2-thioxo-, ethyl ester
Description	: A potent, specific, allosteric and reversible mitotic kinesin Eg5 inhibitor with IC ₅₀ of 14 μ M (microtubule motility inhibition); does not inhibit microtubule motility driven by conventional kinesin at 200 μ M; inhibits both the basal and the microtubule-stimulated ATPase activity of the Eg5 motor domain, does not compete with ATP binding to Eg5; arrests cells in mitosis with monastral spindles, and (S)-monastrol is a more potent inhibitor of Eg5 activity in vitro and in vivo.
Pathway	: Cytoskeleton/Cell Adhesion Molecules
Target	: Kinesin
Receptor	: Eg5
Solubility	: DMSO: $\geq$ 33 mg/mL
SMILES	: <chem>CCOC(=O)C1=C(NC(=S)NC1C2=CC(=CC=C2)O)C</chem>
Storage	: (-20°C)
Stability	: $\geq$ 2 years
Reference	:

1. Mayer TU, et al. Science. 1999 Oct 29;286(5441):971-4. | 2. Kapoor TM, et al. J Cell Biol. 2000 Sep 4;150(5):975-88. | 3. DeBonis S, et al. Biochemistry. 2003 Jan 21;42(2):338-49. | 4. Maliga Z, et al. Chem Biol. 2002 Sep;9(9):989-96.

