PRODUCT INFORMATION

Imatinib (mesylate)
Item No. 13139

CAS Registry No.: 220127-57-1
Formal Name: 4-[(4-methyl-1-piperazinyl)methyl]-N-[4-methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]phenyl]-benzamide, monomethanesulfonate
Synonyms: CGP57148B, Gleevec, Glivec, STI-571
MF: C29H31N7O • CH4SO3
FW: 589.7
Purity: ≥98%
UV/Vis.: λmax: 238, 271 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly

Laboratory Procedures

Imatinib mesylate is supplied as a crystalline solid. A stock solution may be made by dissolving the imatinib mesylate in an organic solvent purged with an inert gas. Imatinib mesylate is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of imatinib mesylate in these solvents is approximately 0.2, 14, and 10 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of imatinib mesylate can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of imatinib mesylate in PBS, pH 7.2, is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Imatinib (mesylate) is a first generation tyrosine kinase inhibitor that is used in the treatment of chronic myelogenous leukemia (CML), gastrointestinal stromal tumors (GIST), and other cancers. It selectively targets certain tyrosine kinases, including c-ABL, platelet-derived growth factor receptor, and KIT.1,2 In CML, imatinib (mesylate) inhibits the oncoprotein BCR-ABL, the product of the Philadelphia chromosome gene fusion.

References