

Imatinib Mesylate PRODUCT DATA SHEET

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Product Name: Imatinib Mesylate

Product Number: 1031

CAS Number: 220127-57-1

Molecular Formula: $C_{29}H_{31}N_7O \cdot CH_3SO_3H$

Molecular Weight: 589.71

Appearance: White to off-white solid

Storage Conditions: 2-8°C

Description: Imatinib mesylate is a tyrosine kinase inhibitor used primarily in the treatment

of leukemia. Chronic Myeloid Leukemia (CML) cells contain a hybrid tyrosine kinase BCR/ABL that works to provide the cancer cell with ATP at an uncontrolled rate. Imatinib mesylate inhbiits this hybrid protein to slow cell

growth and promote apoptosis.

Mechanism of Action: Imatinib mesylate binds to the ATP binding site of the BCR/ABL tyrosine

kinase and stabilizes its inactive form.

References: Goldman, J. M., & Melo, J. V. (2003). Chronic Myeloid Leukemia — Advances

in Biology and New Approaches to Treatment. New England Journal of

Medicine, 349(15), 1451-1464. doi:10.1056/nejmra020777

Marcucci, G., Perrotti, D., & Caligiuri, M. A. (2003, April 1). Understanding the

Molecular Basis of Imatinib Mesylate Therapy in Chronic Myelogenous Leukemia and the Related Mechanisms of Resistance. *Clinical Cancer*

Research, 9(4), 1248-1252. Retrieved from

http://clincancerres.aacrjournals.org/content/9/4/1248

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