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## DATASHEET

Imatinib mesylate

### Product overview

<b>Name</b>	Imatinib mesylate
<b>Cat No</b>	HB1943
<b>Biological action</b>	Inhibitor
<b>Purity</b>	>98%
<b>Description</b>	Tyrosine kinase inhibitor that targets BCR-ABL, c-KIT, and PDGFR kinases

### Biological Data

**Biological description** Tyrosine kinase inhibitor that targets BCR-ABL, c-KIT, and PDGFR kinases. It binds close to the ATP binding site to inhibit enzyme activity semi-competitively, leading to subsequent inhibition of downstream signaling pathways.

Shows anticancer actions and used in chronic myeloid leukemia research.

Shows antiviral actions against SARS-CoV and MERS-Cov in vitro. Recently investigated as part of COVID-19 compound repurposing.

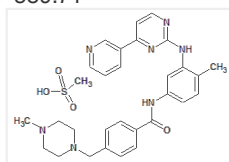
### Solubility & Handling

<b>Storage instructions</b>	+4 °C
<b>Solubility overview</b>	Soluble in water (100mM) and DMSO (100mM)
<b>Important</b>	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

### Chemical Data

**Chemical name** 4-[(4-Methyl-1-piperazinyl)methyl]-N-[4-methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]phenyl]benzamide methanesulfonate  
**Molecular Weight** 589.71

**Chemical structure**



**Molecular Formula** C<sub>29</sub>H<sub>31</sub>N<sub>7</sub>O<sub>4</sub>CH<sub>4</sub>O<sub>3</sub>S  
**CAS Number** 220127-57-1  
**PubChem identifier** 123596  
**SMILES** CS(O)(=O)=O.CN1CCN(CC1)CC2=CC=C(C(NC3=CC=C(C(NC4=NC=CC5=CN=CC=C5)=N4)=C3)C=O)C=C2  
**InChi** InChI=1S/C29H31N7O.CH4O3S/c1-21-5-10-25(18-27(21)34-29-31-13-11-26(33-29)24-4-3-12-30-19-24)32-28(37)23-8-6-22(7-9-23)20-36-16-14-35(2)15-17-36;1-5(2,3)4/h3-13,18-19H,14-17,20H2,1-2H3,(H,32,37)(H,31,33,34);1H3,(H,2,3,4)  
**InChiKey** YLMAHDNUQAMNNX-UHFFFAOYSA-N

## References

### Repurposing of clinically developed drugs for treatment of Middle East respiratory syndrome coronavirus infection

Dyall J *et al* (2014) *Antimicrob Agents Chemother* 58(8)

**PubMedID** [24841273](#)

### Imatinib in chronic myeloid leukemia: an overview

Sacha T (2014) *Mediterr J Hematol Infect Dis* 6(1)

**PubMedID** [24455116](#)

### Inhibition of the Abl protein-tyrosine kinase in vitro and in vivo by a 2-phenylaminopyrimidine derivative

Buchdunger E *et al* (1996) *Cancer Res* 56(1)

**PubMedID** [8548747](#)

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