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DATASHEET

Imatinib mesylate

Product overview

Name	Imatinib mesylate
Cat No	HB1943
Biological action	Inhibitor
Purity	>98%
Description	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.

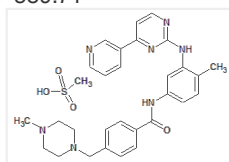
Solubility & Handling

Storage instructions	+4 °C
Solubility overview	Soluble in water (100mM) and DMSO (100mM)
Important	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 C₂₉H₃₁N₇O₃CH₄O₃S
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](#)
