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DATASHEET

Lopinavir

Product overview

Name	Lopinavir
Cat No	HB7108
Alternative names	ABT-378
Biological action	Inhibitor
Purity	>98%
Description	Potent and selective HIV-1 protease inhibitor

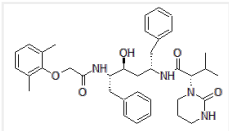
Biological Data

Biological description	Potent and selective HIV-1 protease inhibitor ($EC_{50} = 6.5$ nM, against HIV cultured in peripheral blood mononuclear cells. More potent at inhibiting HIV-1 than ritonavir in vitro but shows poor bioavailability in vivo. Shows antiviral effect against SARS-CoV, MERS-CoV, and hCoV-229E in vitro, (mean EC_{50} ranged from 6.6 to 17.1 μ M). Inhibits SARS-CoV-2 replication in vitro in Vero E6 cells ($EC_{50} =$ Also acts as a potent ER stress inducer.
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Solubility & Handling

Storage instructions	-20 °C
Solubility overview	Soluble in DMSO (100 mM), and in ethanol (100 mM)
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	(2S)-N-[(2S,4S,5S)-5-[2-(2,6-dimethylphenoxy)acetamido]-4-hydroxy-1,6-diphenylhexan-2-yl]-3-methyl-2-(2-oxo-1,3-diazinan-1-yl)butanamide
Molecular Weight	628.8
Chemical structure	
Molecular Formula	$C_{37}H_{48}N_4O_5$
CAS Number	192725-17-0
PubChem identifier	92727
SMILES	<chem>O=C(N[C@@H](Cc1ccccc1)[C@@H](O)C[C@@H](NC(=O)[C@@H](N2C(=O)NCCC2)C(C)C)Cc3cccc3)C(=O)N4CCNCC4</chem>
InChi	InChI=1S/C37H48N4O5/c1-25(2)34(41-20-12-19-38-37(41)45)36(44)39-30(21-28-15-7-5-8-16-28)23-32(42)31(22-29-17-9-6-10-18-29)40-33(43)24-46-35-26(3)13-11-14-27(35)4/h5-11,13-18,25,30-32,34,42H,12,19-24H2,1-4H3,(H,38,45)(H,39,44)(H,40,43)/t30-,31-,32-,34-/m0/
InChiKey	KJHKTHWMRKYKJE-SUGCFTRWSA-N

References

ABT-378, a highly potent inhibitor of the human immunodeficiency virus protease

Sham et al (1998) Antimicrob Agents Chemother 42(12)

PubMedID [9835517](#)

In vitro selection and characterization of human immunodeficiency virus type 1 variants with increased resistance to ABT-378, a novel protease inhibitor

Carrillo et al (1998) J Virol. 72(9)

PubMedID [9696850](#)

Remdesivir, lopinavir, emetine, and homoharringtonine inhibit SARS-CoV-2 replication in vitro

Choy et al (2020) Antiviral Res. 178

PubMedID [32251767](#)
