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DATASHEET

MK-2206 dihydrochloride

Product overview

Name	MK-2206 dihydrochloride
Cat No	HB5934
Alternative names	MK-2206 2HCl
Biological action	Inhibitor
Purity	>98%
Description	Highly selective, pan-Akt inhibitor. Autophagy and apoptosis inducer. Orally bioavailable.

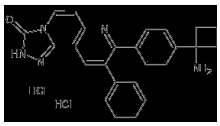
Biological Data

Biological description	Highly selective, allosteric pan-Akt inhibitor (IC_{50} values are 8, 12 and 65 nM at Akt1, Akt2 and Akt3 respectively) which shows no inhibitory activity at 250 other protein kinases. Orally bioavailable and blood brain barrier permeable. Binds to Akt and inhibits it in a non-ATP competitive manner. Shows anti-cancer (antineoplastic) antiproliferative and anti-tumor activity. Synergistically inhibits cell proliferation of human cancer cell lines to enhance anti-tumor efficacy when used in combination with other anticancer agents. Induces cell cycle arrest, autophagy and apoptosis.

Solubility & Handling

Storage instructions	-20°C
Solubility overview	Soluble in DMSO (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	8-[4-(1-aminocyclobutyl)phenyl]-9-phenyl-2H-[1,2,4]triazolo[3,4-f][1,6]naphthyridin-3-one;dihydrochloride
Molecular Weight	480.4
Chemical structure	
Molecular Formula	$C_{25}H_{21}N_5O.2HCl$
CAS Number	1032350-13-2
PubChem identifier	46930998
SMILES	C1CC(C1)(C2=CC=C(C=C2)C3=C(C=C4C(=N3)C=CN5C4=NNC5=O)C6=CC=CC=C6)N.Cl.Cl
InChi	InChI=1S/C25H21N5O.2ClH/c26-25(12-4-13-25)18-9-7-17(8-10-18)22-19(16-5-2-1-3-6-16)15-20-21(27-22)11-14-30-23(20)28-29-24(30)31;;/h1-3,5-11,14-15H,4,12-13,26H2,(H,29,31);2*1H
InChiKey	HWUHTJIKQZZBRA-UHFFFAOYSA-N

References

MK-2206, an allosteric Akt inhibitor, enhances antitumor efficacy by standard chemotherapeutic agents or molecular targeted drugs in vitro and in vivo.

Hirai H et al (2010) Molecular cancer therapeutics 9
PubMedID 20571069

eEF-2 kinase dictates cross-talk between autophagy and apoptosis induced by Akt Inhibition, thereby modulating cytotoxicity of novel Akt inhibitor MK-2206.

Cheng Y et al (2011) Cancer research 71
PubMedID 21307130

Abstract #DDT01-1: MK-2206: A potent oral allosteric AKT inhibitor

Yan Li (2009) New Drugs on the Horizon 1 69