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DATASHEET

NKH 477

Product overview

Name	NKH 477
Cat No	HB2932
Alternative names	Colforsin daropate hydrochloride
Biological action	Activator
Purity	>98%
Description	Potent, water-soluble adenylyl cyclase activator

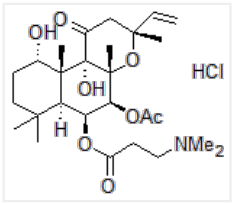
Biological Data

Biological description	Potent, orally active, cell permeable and BBB permeable adenylyl cyclase activator. Water-soluble derivative of forskolin. ~1.87-fold more potent than Forskolin at stimulating insect cell membrane type V adenylate cyclase (AC) activity, while exhibiting similar potency at type II & III AC isoforms. Also shows bronchodilatory, antidepressant and hyoptensive properties in vivo.

Solubility & Handling

Storage instructions	+4°C (desiccate)
Solubility overview	Soluble in water (40mM) 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	N,N-Dimethyl-(3R,4aR,5S,6aS,10S,10aR,10bS)-5-(acetyloxy)-3-ethenyldodecahydro-10,10b-dihydroxy-3,4a,7,7,10a-pentamethyl-1-oxo-1H-naphtho[2,1-b]pyran-6-yl ester β-alanine hydrochloride
Molecular Weight	546.09
Chemical structure	
Molecular Formula	$C_{27}H_{43}NO_8.HCl$
CAS Number	138605-00-2
PubChem identifier	444028
SMILES	Cl.CN(C)CCC(=O)O[C@@H]1[C@H](OC(C)=O)[C@@]3(C)O[C@@](C)(C=C)CC(=O)[C@]3(O)[C@@]2(C)[C@@H](O)CCC(C)(C)[C@H]12
Source	Synthetic
InChi	InChI=1S/C27H43NO8.ClH/c1-10-24(5)15-18(31)27(33)25(6)17(30)11-13-23(3,4)21(25)20(35-19(32)12-14-28(8)9)22(34-16(2)29)26(27,7)36-24;/h10,17,20-22,30,33H,1,11-15H2,2-9H3;1H/t17-,20-,21-,22-,24-,25-,26+,27-;/m0./s1
InChiKey	VIRRLEDAYYYTOD-YHEOSNBFSA-N

MDL number	MFCD00236421
Appearance	White solid

References

Behavioural effects of NKH-477, a forskolin analogue, on locomotion and rearing in rats

Kofman and Bersudsky (2000) Int J Neuropsychopharmacol. 3(1)
PubMedID 11343575

Cardiovascular and adenylate cyclase stimulant properties of NKH477, a novel water-soluble forskolin derivative

Hosono et al (1992) J Cardiovasc Pharmacol 19(4)
PubMedID 1380607

Forskolin derivatives with increased selectivity for cardiac adenylyl cyclase

Toya et al (1998) J Mol Cell Cardiol. 30(1)
PubMedID 9500868