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DATASHEET

K-252a

Product overview

Name	K-252a
Cat No	HB0351
Alternative names	SF 2370
Biological action	Inhibitor
Purity	>97%
Description	Non-selective protein kinase inhibitor

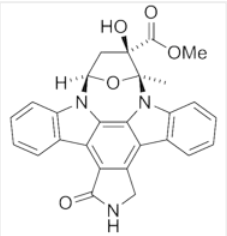
Biological Data

Biological description	Non-selective protein kinase inhibitor (IC_{50} values are 10-30 nM for serine/threonine protein kinases). PKC and Ca^{2+} / calmodulin-stimulated phosphodiesterase inhibitor (IC_{50} values are 32.9 nM and 1.8 - 2.8 µM respectively). Competitively inhibits myosin light chain kinase (MLCK) - may interact with the ATP-binding domain (K_i = 20 nM). Blocks neuronal differentiation by potently inhibiting NGF receptor gp140trk tyrosine protein kinase (IC_{50} = 3nM). Cell permeable and shows potential anti-tumor actions.

Solubility & Handling

Storage instructions	-20°C
Solubility overview	Soluble in DMSO (1mg/ml) or DMF (1mg/ml)
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	(9S,10R,12R)-2,3,9,10,11,12-Hexahydro-10-hydroxy-9-methyl-1-oxo-9,12-epoxy-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxylic acid methyl ester
Molecular Weight	467.5
Chemical structure	
Molecular Formula	$C_{27}H_{21}N_3O_5$
CAS Number	99533-80-9
PubChem identifier	3035817
SMILES	C[C@@]12[C@](C[C@@H](O1)N3C4=CC=CC=C4C5=C6C(=C7C8=CC=CC=C8N2C7=C53)CNC6=O)(C(=O)OC)O
Source	Nocardiopsis sp
InChi	InChI=1S/C27H21N3O5/c1-26-27(33,25(32)34-2)11-18(35-26)29-16-9-5-3-7-13(16)20-21-15(12-28-24(21)31)19-14-8-4-6-10-17(14)30(26)23(19)22(20)29/h3-10,18,33H,11-12H2,1-2H3,(H,28,31)/t18-,26+,27+/m1/s1
InChiKey	KOZFSFOOLUUIGY-SOLYNIJKSA-N
MDL number	MFCD00161522

References

K-252a, a potent inhibitor of protein kinase C from microbial origin.

Kase H *et al* (1986) J Antibiot (Tokyo) 39(8)
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K-252a, a novel microbial product, inhibits smooth muscle myosin light chain kinase.

Nakanishi S *et al* (1988) J Biol Chem 263(13)
PubMedID 2966151

K252a is a selective inhibitor of the tyrosine protein kinase activity of the trk family of oncogenes and neurotrophin receptors.

Tapley P *et al* (1992) Oncogene 7(2)
PubMedID 1312698

The effect of K-252a, a potent microbial inhibitor of protein kinase, on activated cyclic nucleotide phosphodiesterase.

Matsuda Y *et al* (1988) Biochem J 256(1)
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