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DATASHEET

Arctigenin

Product overview

Name	Arctigenin
Cat No	HB0119
Alternative names	(-)-Arctigenin
Biological action	Inhibitor
Purity	>98%
Description	Potent MAP kinase kinase (MKK/MEK) inhibitor

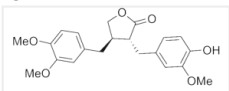
Biological Data

Biological description	Potent MAP kinase kinase (MKK/MEK) inhibitor ($IC_{50} = 1$ nM for MKK1/MEK1). Antiviral, anti-cancer, antioxidant and anti-inflammatory compound. Inhibits iNOS expression by suppressing 1-kBa phosphorylation and nuclear translocation of p65 ($IC_{50} = 10$ nM). Shows neuroprotective actions.
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Solubility & Handling

Storage instructions	-20 °C (desiccate)
Solubility overview	Soluble in ethanol (25mM, gentle warming) or 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	(3 <i>R</i> ,4 <i>R</i>))-4-[(3,4-Dimethoxyphenyl)methyl]dihydro-3-[(4-hydroxy-3-methoxyphenyl)methyl]-2(3 <i>H</i>)-furanone
Molecular Weight	372.42
Chemical structure	
Molecular Formula	C ₂₁ H ₂₄ O ₆
CAS Number	7770-78-7
PubChem identifier	64981
SMILES	OC(C=C3)=C(OC)C=C3C[C@@H](C(OC2=O)[C@H]2CC1=CC(OC)=C(OC)C=C1
InChIKey	NQWVSMVXKMHKTF-JKSUJKDBSA-N

References

Arctigenin protects cultured cortical neurons from glutamate-induced neurodegeneration by binding to kainate receptor.

Jang YP *et al* (2002) J Neurosci Res 68(2)

PubMedID 11948668

Potent inhibition of lipopolysaccharide-inducible nitric oxide synthase expression by dibenzylbutyrolactone lignans through inhibition of I-kappaBalpha phosphorylation and of p65 nuclear translocation in macrophages.

Cho MK *et al* (2002) Int Immunopharmacol 2(1)

PubMedID 11789661

Arctigenin anti-tumor activity in bladder cancer T24 cell line through induction of cell-cycle arrest and apoptosis.

Yang S *et al* (2012) Anat Rec (Hoboken) 295(8)

PubMedID 22619087

Arctigenin, a phenylpropanoid dibenzylbutyrolactone lignan, inhibits MAP kinases and AP-1 activation via potent MKK inhibition: the role in TNF-alpha inhibition.

Cho MK *et al* (2004) 4(10-11)

PubMedID 15313439
