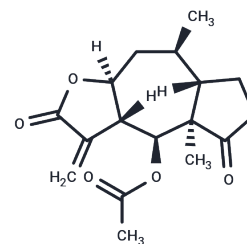


Ergolide

Chemical Properties

CAS No. :	54999-07-4
Formula:	C ₁₇ H ₂₂ O ₅
Molecular Weight:	306.35
Appearance:	no data available
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	Ergolide, a sesquiterpene lactone extracted from the dried flowers of <i>Inula Britannica</i> , effectively hinders the expression of inducible nitric oxide synthase and cyclo-oxygenase-2 in RAW 264.7 macrophages by deactivating NF-κB.
Targets(IC50)	NF-κB
In vitro	Ergolide markedly decreased the production of prostaglandin E(2) (PGE(2)) in cell-free extract of LPS/IFN-gamma-stimulated RAW 264.7 macrophages in a concentration-dependent manner, without alteration of the catalytic activity of COX-2 itself. Ergolide decreased the level of iNOS and COX-2 protein, and iNOS mRNA caused by stimulation of LPS/IFN-gamma in a concentration-dependent manner, as measured by Western blot and Northern blot analysis, respectively. Ergolide inhibited nuclear factor-kappaB (NF-kappaB) activation, a transcription factor necessary for iNOS and COX-2 expression in response to LPS/IFN-gamma. This effect was accompanied by the parallel reduction of nuclear translocation of subunit p65 of NF-kappaB as well as IkappaB-alpha degradation. In addition, these effects were completely blocked by treatment of cysteine, indicating that this inhibitory effect of ergolide could be mediated by alkylation of NF-kappaB itself or an upstream molecule of NF-kappaB. Ergolide also directly inhibited the DNA-binding activity of active NF-kappaB in LPS/IFN-gamma-pretreated RAW 264.7 macrophages. These results demonstrate that the suppression of NF-kappaB activation by ergolide might be attributed to the inhibition of nuclear translocation of NF-kappaB resulted from blockade of the degradation of IkappaB and the direct modification of active NF-kappaB, leading to the suppression of the expression of iNOS and COX-2, which play important roles in inflammatory signalling pathway.

Solubility Information

Solubility	DMSO: 50 mg/mL (163.21 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.2642 mL	16.3212 mL	32.6424 mL
5 mM	0.6528 mL	3.2642 mL	6.5285 mL
10 mM	0.3264 mL	1.6321 mL	3.2642 mL
50 mM	0.0653 mL	0.3264 mL	0.6528 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Whan Han J, et al. Ergolide, sesquiterpene lactone from *Inula britannica*, inhibits inducible nitric oxide synthase and cyclo-oxygenase-2 expression in RAW 264.7 macrophages through the inactivation of NF-kappaB. *Br J Pharmacol.* 2001 Jun;133(4):503-12.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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