For Research Use Only

Forsythoside B

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Catalog Number: CM06681

产品信息

Catalog Number:
CM06681

CAS号:
81525-13-5

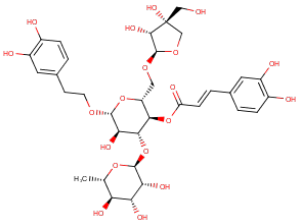
分子式:
$C_{34}H_{44}O_{19}$

主要靶点:
NF-κB|TNF

主要通路:
NF-κB信号通路|凋亡

分子量:
756.71

溶解度:
DMSO:132.2 mM



体外活性

Forsythoside B down-regulates the levels of TNF-α, IL-6 and high-mobility group-box 1 protein (HMGB1) in lipopolysaccharide (LPS)-stimulated RAW264.7 cells, inhibits the IκB kinase (IKK) pathway and modulated nuclear factor (NF)-κB in a concentration-dependently manner[1].

体内活性

Intravenous injection of forsythoside B alone or plus imipenem reduces serum levels of TNF-α, IL-6, HMGB1, triggering receptor expressed on myeloid cells (TREM-1) and endotoxin, while the serum level of IL-10 is up-regulated and myeloperoxidase (MPO) in lung, liver and small intestine is reduced[1]. Forsythoside B at doses higher than 8 mg/kg produces a significant neuroprotective potential in cerebral ischemia and reperfusion rats. Forsythoside B (20 mg/kg) demonstrates significant neuroprotective activity even after delayed administration at 1 h, 3 h and 5 h after cerebral ischemia and reperfusion. Forsythoside B 20 mg/kg attenuates histopathological damage as demonstrated by smaller brain infarct size and brain edema, decreased cerebral Evans blue extravasation and myeloperoxidase activity, inhibited cerebral phosphor-IκB-α and NF-κB expression[2]. Forsythoside B shows a significant recovery in myocardial function with improvement of LVSP and +/-dp/dt(max). The myocardial infarct volume, serum levels of Tn-T, TNF-alpha and IL-6, content of MDA and MPO activity in myocardial tissue are all reduced, protein expression of HMGB1, phosphor-I kappaB-alpha and phosphor-NF-kappaB are down-regulated, while attenuate the decrease of SOD and GPx activities[3]. Forsythoside B alone or plus Imipenem reduced CLP-induced lethality in rats.

细胞实验

Forsythoside B is dissolved in sterile saline solution and added to the medium at various concentrations (from 0.1 to 10 μM) and incubated with LPS stimulated RAW264.7 cells. Cell-free supernatants are collected after Forsythoside B treatment for 24 h. Cell viability is assessed by measuring lactate dehydrogenase (LDH) in the medium[1].

描述

Forsythoside B binds to LPS and reduces the biological activity of serum LPS, and inhibits NF-κB activation. Forsythoside B inhibits the inflammatory response and has antioxidant properties. Potent neuroprotective effects with a favorable therapeutic time-window, reduce of cerebral ischemia and reperfusion injury degree, attenuating blood-brain barrier (BBB) breakdown; Rescued cardiac function from I/R injury. Forsythoside B has antisepsis effect, is mediated by decreasing local and systemic levels of a wide spectrum of inflammatory mediators.

储存

Powder: -20°C for 3 years | In solvent: -80°C for 1 year