Data Sheet (Cat.No.TN3287)

TargetMol
A DRUG SCREENING EXPERT

8-Lavandulylkaempferol

Chemical Properties

CAS No.:	883859-83-4
Formula:	C25H26O6
Molecular Weight:	422.5
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	8-Lavandulylkaempferol exhibits significant inhibitory effects with IC(50) values of 7.10 and 8.11 microM for butyrylcholinesterase and acetylcholinesterase, respectively. It shows inhibitory activities against aldose reductase, with the the IC50 of 0.79 microM.
Targets(IC_{50})	AChR: None Aldose reductase: None
In vitro	Important targets for the prevention and treatment of diabetic complications include aldose reductase (AR) inhibitors (ARIs) and inhibitors of advanced glycation endproduct (AGE) formation. METHODS AND RESULTS: Here we evaluate the inhibitory activities of prenylated flavonoids isolated from Sophora flavescens, a traditional herbal medicine, on rat lens AR (RLAR), human recombinant AR (HRAR) and AGE formation. Among the tested compounds, two prenylated chalcones--desmethylanhydroicaritin (1) and 8-Lavandulylkaempferol (2)--along with five prenylated flavanones--kurarinol (8), kurarinone (9), (2S)-2'-methoxykurarinone (10), (2S)-3beta,7,4'-trihydroxy-5-methoxy-8-(gamma,gamma-dimethylally)-flavanone (11), and kushenol E (13) were potent inhibitors of RLAR, with IC50 values of 0.95, 3.80, 2.13, 2.99, 3.77, 3.63 and 7.74 microM, respectively, compared with quercetin (IC50 7.73 microM). In the HRAR assay, most of the prenylated flavonoids tested showed marked inhibitory activity compared with quercetin (IC50 2.54 microM). In particular, all tested prenylated flavonols, such as desmethylanhydroicaritin (1, IC50 0.45 microM), 8-Lavandulylkaempferol (2, IC50 0.79 microM) and kushenol C (3, IC50 0.85 microM), as well as a prenylated chalcone, kuraridin (5, IC50 0.27 microM), and a prenylated flavanone, (2S)-7,4'-dihydroxy-5-methoxy-8-(gamma,gamma-dimethylally)-flavanone (12, IC50 0.37 microM), showed significant inhibitory activities compared with the potent AR inhibitor epalrestat (IC50 0.28 microM). Interestingly, prenylated flavonoids 1 (IC50 104.3 microg mL(-1)), 2 (IC50 132.1 microg mL(-1)), 3 (IC50 84.6 microg mL(-1)) and 11 (IC50 261.0 microg mL(-1)), which harbour a 3-hydroxyl group, also possessed good inhibitory activity toward AGE formation compared with the positive control aminoguanidine (IC50 115.7 microg mL(-1)). CONCLUSIONS: Thus, S. flavescens and its prenylated flavonoids inhibit the processes that underlie diabetic complications and related diseases and may therefore have therapeutic benefit.

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.367 mL	11.834 mL	23.669 mL
5 mM	0.473 mL	2.367 mL	4.734 mL
10 mM	0.237 mL	1.183 mL	2.367 mL
50 mM	0.047 mL	0.237 mL	0.473 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Inhibitory activities of prenylated flavonoids from Sophora flavescens against aldose reductase and generation of advanced glycation endproducts. J Pharm Pharmacol. 2008 Sep;60(9):1227-36.

Tel:781-999-4286 E-mail:info@targetmol.com Address:36 Washington Street,Wellesley Hills,MA 02481