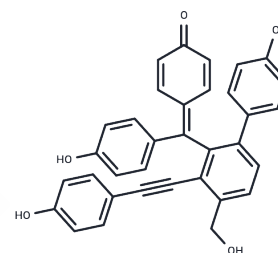


## Selaginellin

## Chemical Properties

CAS No. :	941269-84-7
Formula:	C <sub>34</sub> H <sub>24</sub> O <sub>5</sub>
Molecular Weight:	512.55
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Selaginellin has a neuroprotective effect against L-glutamate-induced neurotoxicity through mechanisms related to anti-oxidation and anti-apoptosis via scavenging reactive oxygen species and up-regulating the expression of klotho gene. Selaginellin shows inhibitory effect on high glucose-induced cell injury and apoptosis in differentiated PC12 cells, which is related to inhibition of LOX-1/NADPH oxidase-reactive oxygen species/caspase-3 signaling pathway.
Targets(IC50)	Reactive Oxygen Species, Sirtuin
In vitro	L-glutamate plays a key role in neuronal cell death associated with many neurodegenerative conditions such as cerebral ischemia, hypoxia, Alzheimer's, Huntington's, and Parkinson's diseases. METHODS AND RESULTS: Selaginellin, a component extracted from Saussurea pulvinata (Hook.et Grev.) Maximo, was assessed for its ability to protect rat pheochromocytoma (PC12) cells against oxidative toxicity induced by glutamate. The differentiated PC12 cells were pretreated with various concentrations (10 <sup>-7</sup> ), 3 x 10 <sup>-7</sup> , or 10 <sup>-6</sup> M) of Selaginellin for 1 h prior to exposure to L-glutamate. Selaginellin was shown to protect PC12 cells against glutamate toxicity, as determined by characteristic morphological features, lactate dehydrogenase release and cell viability, and apoptosis as evaluated by Hoechst 33342 staining assay and caspase-3 activity. In addition, the increase in levels of reactive oxygen species and decrease in klotho gene expression induced by glutamate were significantly reversed by Selaginellin. CONCLUSIONS: Our study suggests that Selaginellin has a neuroprotective effect against L-glutamate-induced neurotoxicity through mechanisms related to anti-oxidation and anti-apoptosis via scavenging reactive oxygen species and up-regulating the expression of klotho gene.

### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	1.951 mL	9.7551 mL	19.5103 mL
5 mM	0.3902 mL	1.951 mL	3.9021 mL
10 mM	0.1951 mL	0.9755 mL	1.951 mL
50 mM	0.039 mL	0.1951 mL	0.3902 mL

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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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Protective effect of selaginellin on glutamate-induced cytotoxicity and apoptosis in differentiated PC12 cells.  
Naunyn Schmiedebergs Arch Pharmacol. 2010 Jan;381(1):73-81.

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