

## Penduletin

## Chemical Properties

CAS No.:	569-80-2
Formula:	C <sub>18</sub> H <sub>16</sub> O <sub>7</sub>
Molecular Weight:	344.3
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).

## Biological Description

Description	Penduletin has anti-inflammatory, anti-tumor cells, and anti-bacterial activities, it inhibits growth of the Gram-negative pathogen <i>Neisseria gonorrhoeae</i> . Penduletin has strong activity in vitro against EV71 with low cytotoxicity.
Targets(IC <sub>50</sub> )	Antifection: None COX: None PGE: None TGF- $\beta$ /Smad: None VEGFR: None
In vitro	In recent years, enterovirus 71 (EV71) infections have caused an increasing epidemic in young children, accompanying with more severe nervous system disease and more deaths. Unfortunately, there is no specific medication for it so far. METHODS AND RESULTS: Here we investigated the anti-EV71 activity of chrysosplenetin and Penduletin, two o-methylated flavonols isolated from the leaves of <i>Lagdera pterodonta</i> . These two compounds were found to have strong activity in vitro against EV71 with low cytotoxicity. In the cytopathic effect (CPE) inhibition assays, both plaque reduction assay and virus yield inhibition assay, the compounds showed a similar 50% inhibitory concentration (IC <sub>50</sub> ) value of about 0.20 $\mu$ M. The selectivity indices (SI) of chrysosplenetin and Penduletin were 107.5 and 655.6 in African green monkey kidney (Vero) cells, and 69.5 and 200.5 in human rhabdomyosarcoma (RD) cells, accordingly. The preliminary mechanism analysis indicates that they function not through blocking virus entry or inactivating virus directly but inhibiting viral RNA replication. In the time-of-addition assay, both compounds inhibited progeny virus production and RNA replication by nearly 100% when introduced within 4h post infection. In addition to EV71, both compounds inhibited several other human enteroviruses with similar efficacy. CONCLUSIONS: These findings provide a significant lead for the discovery of anti-EV71 drug.

## Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble
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## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.904 mL	14.522 mL	29.044 mL
5 mM	0.581 mL	2.904 mL	5.809 mL
10 mM	0.290 mL	1.452 mL	2.904 mL
50 mM	0.058 mL	0.290 mL	0.581 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 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

## Reference

1. Inhibition of enterovirus 71 replication by chrysosplenetin and penduletin. Eur J Pharm Sci. 2011 Oct 9;44(3):392-8.
2. Antineoplastic agents 540. The Indian Gynandropsis gynandra (Capparidaceae). Oncol Res. 2005;15(2):59-68.
3. Flavonoids from Artemisia copa with anti-inflammatory activity. Planta Med. 2006 Jan;72(1):72-4.

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