

## Taxinine B

**Chemical Properties**

CAS No.:	18457-44-8
Formula:	C <sub>37</sub> H <sub>44</sub> O <sub>11</sub>
Molecular Weight:	664.8
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).

**Biological Description**

Description	Taxinine and taxinine B can inhibit the drug transport by P-glycoprotein in multidrug-resistant cells. Taxinine B shows stronger inhibitory effects than acetylsalicylic acid (ASA) on platelet aggregation induced by arachidonic acid (AA).
Targets(IC <sub>50</sub> )	Others: None
In vitro	Platelets are highly reactive components of the circulatory system. The cytoskeleton of a platelet is an important structure for platelet aggregation as stimulated by several agonists. An anticancer agent, taxol, has been suggested to exert platelet anti-aggregating activity by stabilizing microtubules during the aggregation process. METHODS AND RESULTS: An activity-guided fractionation was performed with a methanol extract of the leaves and twigs of <i>Taxus cuspidata</i> to isolate taxanes with platelet anti-aggregating effects. Compounds 1 to 7 - taxinine (1), taxinine A (2), Taxinine B (3), 2-deacetoxyTaxinine B (4), taxacin (5), taxchinin B (6), and taxol (7) - were obtained as the antiplatelet components of this plant. These taxane compounds present the possibility of securing new antiplatelet compounds which differ from currently available antiplatelet agents in chemical structure and possibly in mechanisms of action. CONCLUSIONS: All compounds showed stronger inhibitory effects than acetylsalicylic acid (ASA) on platelet aggregation induced by arachidonic acid (AA) (IC <sub>50</sub> ): 14.4, 64.5, 35.5, 16.0, 21.9, 28.6 and 48.2 versus 63.0μM) or U46619 (IC <sub>50</sub> ): 34.8, 24.9, 36.2, 35.0, 46.9, 71.9 and 68.7 versus 340μM). Compounds 1, 3, 4 and 5, with a cinnamoyl group at the C(5) position, showed strong inhibitory effects against AA-induced aggregation compared to compound 2 (with an -OH group at C(5)) or compounds with an oxetane ring at C(4),(5), such as compounds 6 and 7. All of the seven compounds were 5-13-fold more strongly inhibitory than ASA against U46619-induced aggregation.

**Solubility Information**

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

	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	1.504 mL	7.521 mL	15.042 mL
5 mM	0.301 mL	1.504 mL	3.008 mL
10 mM	0.150 mL	0.752 mL	1.504 mL
50 mM	0.030 mL	0.150 mL	0.301 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. A comparative optical aggregometry study of antiplatelet activity of taxanes from *Taxus cuspidata*. *Thromb Res.* 2010 Jun;125(6):e281-4.

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