



Percentage Composition: C 79.28%; H 9.89%; O 10.83%
Biological Source: Constit. of *Betula platyphylla* var. *japonica*
Physical Description: Amorph. powder
Optical Rotation: $[\alpha]_D -16$ (c, 0.5 in MeOH)
UV: [neutral] $\lambda_{\max}$ 329 (log ϵ 4.23) (MeOH)

>>**Derivative:** 3-(3,4-Dihydroxycinnamoyl)
Synonym(s): Dammarenediol II 3-*O*-caffeate

CAS Registry Number: 171438-55-4

Molecular Formula: C₃₉H₅₈O₅
Molecular Weight: 606.884
Accurate Mass: 606.428425
Percentage Composition: C 77.19%; H 9.63%; O 13.18%
Biological Source: Constit. of *Betula ermanii*
Physical Description: Cryst. (EtOAc)
Melting Point: Mp 205-207°
Optical Rotation: $[\alpha]_D +47$ (c, 0.2 in MeOH)

>>**Derivative:** 3-*O*-[β -D-Glucopyranosyl-(1 $\rightarrow$ 2)- β -D-glucopyranoside], 20-*O*-[β -D-glucopyranosyl-(1 $\rightarrow$ 6)- β -D-glucopyranoside]
Synonym(s): Notoginsenoside I

CAS Registry Number: 193977-08-1

Molecular Formula: C₅₄H₉₂O₂₂
Molecular Weight: 1093.308
Accurate Mass: 1092.60803
Percentage Composition: C 59.32%; H 8.48%; O 32.19%
Biological Source: Constit. of *Panax notoginseng*
Physical Description: Cryst. (MeOH aq.)
Melting Point: Mp 209-211°
Optical Rotation: $[\alpha]_D^{24} +0.8$ (c, 0.1 in MeOH)

>>**Derivative:** 3-*O*-[β -D-Glucopyranosyl-(1 $\rightarrow$ 2)-6-*O*-acetyl- β -D-glucopyranoside], 20-*O*-[β -D-xylopyranosyl-(1 $\rightarrow$ 6)- β -D-glucopyranoside]
Synonym(s): Pseudoginsenoside F₈

CAS Registry Number: 69884-01-1

Molecular Formula: C₅₅H₉₂O₂₂
Molecular Weight: 1105.319
Accurate Mass: 1104.60803
Percentage Composition: C 59.77%; H 8.39%; O 31.84%
Biological Source: Constit. of *Panax pseudo-ginseng* ssp. *himalaicus*
Physical Description: Powder
Optical Rotation: $[\alpha]_D^{19} +6.2$ (c, 0.96 in MeOH)

References:

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Kasai, R. *et al.*, *Chem. Pharm. Bull.*, 1974, **22**, 1213; 1977, **25**, 3277, (*synth, ms*)
Asakawa, J. *et al.*, *Tetrahedron*, 1977, **33**, 1935, (*cmr*)
Tanaka, O. *et al.*, *Phytochemistry*, 1978, **17**, 1353-1358, (*Pseudoginsenoside F₈*)
Minh Duc, N. *et al.*, *Chem. Pharm. Bull.*, 1994, **42**, 115, (*Vinaginsenoside R3*)
Fuchino, H. *et al.*, *Chem. Pharm. Bull.*, 1995, **43**, 1937-1942; 1996, **44**, 1033-1038, (*caffeate, coumarate*)
Corey, E.J. *et al.*, *J.A.C.S.*, 1996, **118**, 8765-8766, (*synth*)
Yoshikawa, M. *et al.*, *Chem. Pharm. Bull.*, 1997, **45**, 1056-1062, (*Notoginsenoside I*)
Johnson, W.S. *et al.*, *J.O.C.*, 1999, **64**, 9587-9595, (*synth*)