



>>Variant: (1 α ,5 β ,6 α ,8 β ,10 α)-form

Synonym(s): **Helenalin. Helenine**‡

CAS Registry Number: 6754-13-8

Molecular Formula: C₁₅H₁₈O₄

Molecular Weight: 262.305

Accurate Mass: 262.12051

Percentage Composition: C 68.69%; H 6.92%; O 24.40%

Biological Source: Constit. of *Helenium arnica* and *Gaillardia* spp.

Biological Use/Importance: Has sternutatory and vermifugal props. Exp. antineoplastic agent. Reported to be cardiogenic. Modulates growth-factor induced Ca signalling

Physical Description: Cryst. (EtOH or C₆H₆)

Melting Point: Mp 225-228°

Optical Rotation: $[\alpha]_D^{25}$ -102.8 (CHCl₃)

Calculated Log P Data: Log P -0.39 (calc)

UV: [neutral] $\lambda_{\max}$ 223 (ϵ 11900); 318 (ϵ 60) (95% EtOH) (Derep) [neutral] $\lambda_{\max}$ 219 (ϵ 12886) (MeOH) (Berdy) [neutral] $\lambda_{\max}$ 223 (ϵ 11900) (EtOH) (Berdy)

Hazard & Toxicity: LD₅₀ (rat, orl) 125 mg/kg. Irritant, sternutator, dermatitic agent. Can be fatal by ingestion

>>Derivative: Ac

Synonym(s): **Angustibalin**

CAS Registry Number: 10180-86-6

Molecular Formula: C₁₇H₂₀O₅

Molecular Weight: 304.342

Accurate Mass: 304.131075

Percentage Composition: C 67.09%; H 6.62%; O 26.29%

Biological Source: Constit. of *Balduina angustifolia*

Use/Importance: Antineoplastic agent

Physical Description: Needles (CH₂Cl₂)

Melting Point: Mp 181°

Optical Rotation: $[\alpha]_D^{25}$ -54 (c, 0.1 in C₆H₆)

Calculated Log P Data: Log P 0.51 (calc)

UV: [neutral] $\lambda_{\max}$ 221 (ϵ 13200) (MeOH) (Berdy)

>>Derivative: *O*-(2-Methylpropenoyl)

Molecular Formula: C₁₉H₂₂O₅

Molecular Weight: 330.38

Accurate Mass: 330.146725

Percentage Composition: C 69.07%; H 6.71%; O 24.21%

Biological Source: Constit. of *Monactis macbridei*

Physical Description: Oil

Optical Rotation: $[\alpha]_D^{24}$ -42 (c, 0.18 in CHCl₃)

>>Derivative: *O*-(2-Hydroxymethylpropenoyl)

Synonym(s): **Kingiolide**

CAS Registry Number: 79421-62-8

Molecular Formula: C₁₉H₂₂O₆

Molecular Weight: 346.379

Accurate Mass: 346.14164

Percentage Composition: C 65.88%; H 6.40%; O 27.71%

Biological Source: Constit. of *Kingianthus paradoxus*

Physical Description: Gum

Optical Rotation: $[\alpha]_D^{24}$ -70.1 (c, 6.5 in CHCl₃)