

§ Shengmanol; 1 α -Hydroxy, 23-Ac, 3-O- β

-D-xylopyranoside

[CAS No.] 162897-43-0

[化合物分類] テルペノイド (Cycloartane triterpenoid)

[構造式]

[分子式] $C_{37}H_{58}O_{11}$

[分子量] 678.859

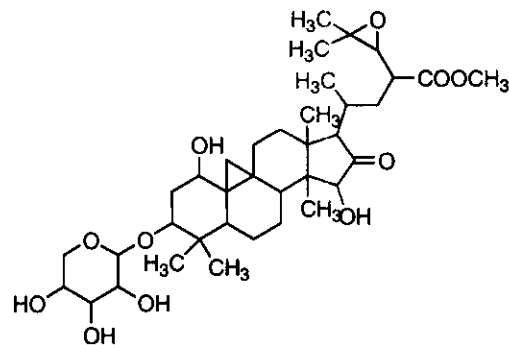
[正確な分子量] 678.397915

[基原] *Cimicifuga simplex*

[性状] 針状結晶 (MeOH)

[融点] Mp 245-247 °C

[比旋光度]: $[\alpha]_D^{25} +20$ (c, 0.5 in MeOH)



-----文献-----

Sakurai, N. et al., Chem. Pharm. Bull., 1979, 27, 158

Kusano, A. et al., Chem. Pharm. Bull., 1994, 42, 1940; 1995, 43, 279; 1999, 47, 1175, (分離, H-NMR, C13-NMR, 誘導體)

§ 3,11,24,25-Tetrahydrocycloart-7-ene-16,23-dione; (3 β , 11 β , 24R)-form, 3-O- β -D-Xylopyranoside

[化学名・別名] Cimicifugoside H2. Cimicidol 3-O- β -xyloside

[CAS No.] 161097-77-4

[化合物分類] テルペノイド (Cycloartane triterpenoid)

[構造式]

[分子式] $C_{35}H_{54}O_{10}$

[分子量] 634.806

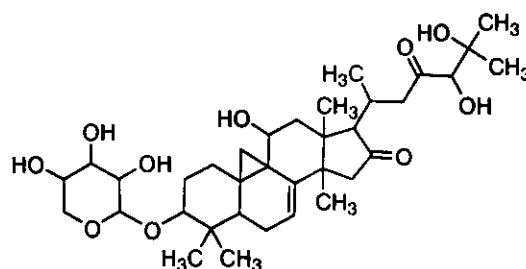
[正確な分子量] 634.3717

[基原] *Cimicifuga foetida*, *Cimicifuga simplex* (キンボウゲ科)

[性状] 針状結晶

[融点] Mp 227-229 °C

[比旋光度]: $[\alpha]_D -38.8$ (c, 1 in MeOH)



-----文献-----

Koeda, M. et al., Chem. Pharm. Bull., 1995, 43, 771; 1475, (分離, H-NMR, C13-NMR)

Kadota, S. et al., Tetrahedron, 1995, 51, 1143, (分離, H-NMR, C13-NMR)

§ 16,23:23,26:24,25-Triepoxycycloart-7-ene-1,3,26-triol; (1 α , 3 β , 16 β , 23R, 24R, 25S, 26 ξ)-form, 3-O- β -D-Xylopyranoside

[化学名・別名] Bugbanoside A

[その他の CAS No.] 211106-15-9, 211106-16-0

[化合物分類] テルペノイド (Cycloartane triterpenoid)

[構造式]

[分子式] $C_{35}H_{52}O_{10}$

[分子量] 632.79

[正確な分子量] 632.35605

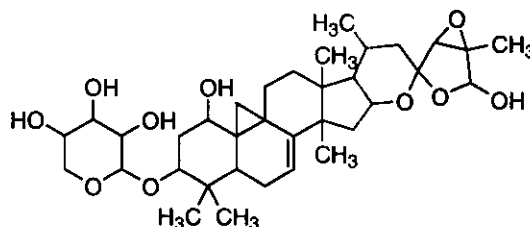
[基原] *Cimicifuga simplex*

[性状] 針状結晶 (MeOH)

[融点] Mp 205-206 °C

[比旋光度]: $[\alpha]_D -42.7$ (c, 0.43 in MeOH)

[その他のデータ] 26-epimers の混合物



-----文献-----

Kusano, A. et al., Chem. Pharm. Bull., 1998, 46, 1001, (分離, H-NMR, C13-NMR)

§ 16,23:23,26:24,25-Triepoxycycloart-7-ene-1,3,26-triol; (1 α , 3 β , 16 β , 23R, 24R, 25S, 26 ξ)-form, 7,8-Dihydro, 3-O- β -D-xylopyranoside

[化学名・別名] Bugbanoside B

[その他の CAS No.] 211106-24-0, 211106-25-1

[化合物分類]テルペノイド (Cycloartane triterpenoid)

[構造式]

[分子式] $C_{35}H_{54}O_{10}$

[分子量] 634.806

[正確な分子量] 634.3717

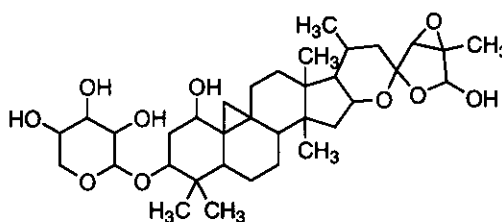
[基原] *Cimicifuga simplex*

[性状] 針状結晶 (MeOH)

[融点] Mp 244-245 °C

[比旋光度]: $[\alpha]_D^{20} -21.3$ (c, 0.2 in MeOH)

[その他のデータ] 26-epimers の混合物



-----文献-----

Kusano, A. et al., Chem. Pharm. Bull., 1998, 46, 1001, (分離, H-NMR, C13-NMR)

§ 3,11,24-Trihydroxy-25,26,27-trinorcychoart-7-ene-16,23-dione; (3 β ,11 β)-form, 3-O- β

-D-Xylopyranoside

[化学名・別名] Cimicifugoside H3

[CAS No.] 163046-74-0

[化合物分類]テルペノイド (Cycloartane triterpenoid)

[構造式]

[分子式] $C_{32}H_{48}O_9$

[分子量] 576.726

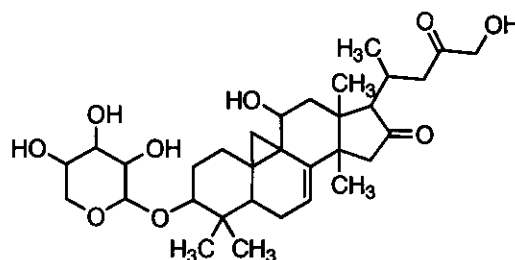
[正確な分子量] 576.329835

[基原] *Cimicifuga simplex*

[性状] 針状結晶 (MeOH)

[融点] Mp 251 °C

[比旋光度]: $[\alpha]_D^{20} -22.3$ (c, 0.4 in $CHCl_3/MeOH$)



-----文献-----

Koeda, M. et al., Chem. Pharm. Bull., 1994, 42, 2205, (分離, H-NMR, C13-NMR)

Sakurai, N. et al., Chem. Pharm. Bull., 1995, 43, 1475

*****サルサパリラ (Sarusaparilla) *****

§ § ユリ科メキシカンサルサパリラ (*Smilax medica* Schlechtendal et Chamisso) の根。

§ Pollinastanol

[化学名・別名] 9,19-Cyclo-14-methylcholestan-3-ol. Pollinasterol

[CAS No.] 1912-66-9

[化合物分類]ステロイド (Nonaromatic 19-norandrostane steroids: estrane). (C18).

[構造式]

[分子式] $C_{28}H_{48}O$

[分子量] 400.687

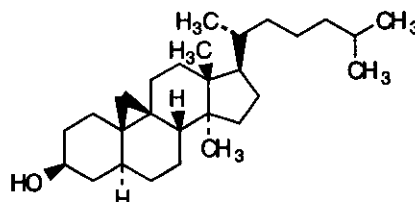
[正確な分子量] 400.370515

[基原] 花粉から分離。また、シダ類: *Polypodium vulgare*, *Smilax medica* (Sarsaparilla)

[性状] 結晶 (MeOH)

[融点] Mp 111-112 °C (95 °C)

[比旋光度]: $[\alpha]_D^{20} +35$ ($CHCl_3$)



-----文献-----

Hügel, M.F. et al., Bull. Soc. Chim. Fr., 1964, 2012, (分離)

Devys, M. et al., C. R. Hebd. Seances Acad. Sci. Ser. D, 1969, 269, 2033, (分離)

Khuong-Huu, F. et al., Tet. Lett., 1975, 1787, (C13-NMR)

Ducruix, A. et al., Acta Cryst. B, 1976, 32, 76, (結晶構造, Ac)

Devys, M. et al., Apidologie, 1977, 8, 83, (レビュー)

*****サルシファイ (Salsify) *****

§ § キク科バラモンジン (*Tragopogon porrifolius* L. (*T. sativus* Gate)) の茎葉または根茎。
本調査研究では研究報告ない。

§ § キク科キクゴボウ (キバナバラモンジン) (*Scorzonera hispanica* L.) の茎葉または根 茎。

§ 3-(3,4-Dihydroxyphenyl)-2-propen-1-ol; (*E*)-form, 3'-Me ether, 4'-O-β-D-glucopyranoside

[化学名・別名] Abietin. Coniferin. Coniferoside. Laricin

[CAS No.] 531-29-3

[化合物分類] 単環芳香族 (Simple phenylpropanoid)

[構造式]

[分子式] C₁₆H₂₂O₈

[分子量] 342.345

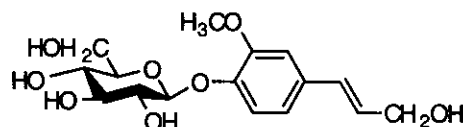
[正確な分子量] 342.13147

[基原] Chief glycoside of the Coniferae. 例えば, *Larix europaea*, *Fraxinus quadrangulata*, *Scorzonera hispanica* から分離する

[性状] 針状結晶・二水和物

[融点] Mp 185 °C

[比旋光度]: [α]_D²⁰ -66.9 (Py 溶液)



-----文献-----

Plouvier, V., C. R. Hebd. Seances Acad. Sci., 1954, 238, 1835, (分離, Coniferin)

Metwally, M.A. et al., Phytochemistry, 1985, 24, 182, (Coniferyl ferulate)

Niwa, M. et al., Chem. Pharm. Bull., 1988, 36, 1158, (Coniferinoside)

Binks, R.H. et al., Phytochemistry, 1997, 45, 47, (cis-Coniferin)

Greca, M.D. et al., Phytochemistry, 1998, 49, 1299, (Coniferyl alcohol, Citrusin D)

Daubresse, N. et al., Synthesis, 1998, 157, (Coniferin, 合成法)

§ 9-Hydroxy-4(15),10(14)-guaianadien-12,6-olide; (1 α,5 α,6 α,9 α,11 β H)-form, 9-O-β-D-Glucopyranoside

[化学名・別名] Scorzoside

[CAS No.] 106009-45-4

[化合物分類] テルペノイド (12,6-Guaianolide sesquiterpenoid)

[構造式]

[分子式] C₂₁H₃₀O₈

[分子量] 410.463

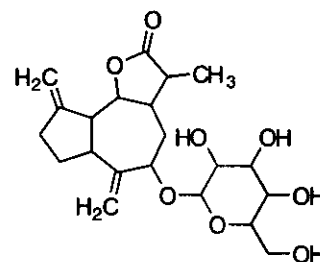
[正確な分子量] 410.19407

[基原] *Scorzonera hispanica*

[性状] 結晶 (MeOH)

[融点] Mp 95-97 °C

[比旋光度]: [α]_D²⁰ -39 (c, 0.23 in MeOH)



-----文献-----

Bryanskii, O.V. et al., Khim. Prir. Soedin., 1992, 38, 640; Chem. Nat. Compd. (Engl. Transl.), 1992, 28, 556, (分離, H-NMR, C13-NMR)

*****サルノコシカケ (Sarunokosikake) *****

§ § サルノコシカケ科サルノコシカケ (*Polyporus officinalis* Frie) の子実体。

§ 2-Hydroxy-1,2,3-nonadecanetricarboxylic acid; (2*S*,3*S*)-form

[化合物分類] 脂肪族化合物 (Branched aliphatic carboxylic acid)

[構造式]

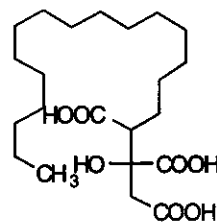
[基原] *Polyporus officinalis*

[性状] 葉状結晶 + 1·1/2 H₂O (EtOH 溶液). 100 °C で無水になる

[融点] Mp 141.5-142 °C

[比旋光度]: [α]_D¹⁹ -8.84 (NaOH)

[溶解性] エタノール, エーテルに難溶



-----文献-----

Thoms, H. et al., *Annalen*, 1907, 357, 145, (構造決定)

Evans, D.W.S., *J.C.S.*, 1959, 1313

Karrer, W. et al., *Konstitution und Vorkommen der Organischen Pflanzenstoffe*, 2nd edn., Birkhauser Verlag, Basel, 1972, 882, (成書)

Brandange, S. et al., *Acta Chem. Scand.*, Ser. B, 1977, 31, 307, (絶対構造)

§ Polyporenic acid D

[化学名・別名] 3 α-Hydroxy-24-methylenelanost-8-en-26-oic acid

[化合物分類] テルペノイド (Lanostane triterpenoid)

[構造式]

[分子式] C₃₁H₅₀O₃

[分子量] 470.734

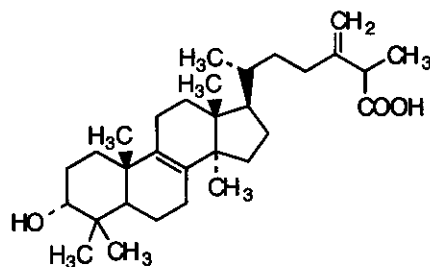
[正確な分子量] 470.375995

[基原] *Polyporus officinalis*

[性状] 結晶 (MeOH)

[融点] Mp 268-270 °C

[比旋光度]: [α]_D +40 (Py)



-----文献-----

Thappa, R.K. et al., *Phytochemistry*, 1981, 20, 1746

§ § マンネンタケ科マンネンタケ (*Ganoderma lucidum* Karsten) の子実体。

§ 3,7-Dihydroxy-11,15-dioxolanosta-8,24-dien-26-oic acid; (3 β,7 β,24*E*)-form

[化学名・別名] Ganoderic acid β

[CAS No.] 217476-76-1

[化合物分類] テルペノイド (Lanostane triterpenoid)

[構造式]

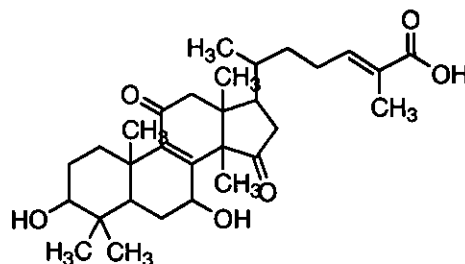
[基原] *Ganoderma lucidum*

[性状] 針状結晶 (EtOH/MeOH 溶液)

[融点] Mp 187-189 °C

[比旋光度]: [α]_D +60 (c, 0.1 in MeOH)

[UV]: [neutral] λ_{max} 215 (ε 12590); 252 (ε 6310) (MeOH)



-----文献-----

Min, B.-S. et al., *Chem. Pharm. Bull.*, 1998, 46, 1607, (分離, H-NMR, C13-NMR)

§ 15,23-Dihydroxy-3,11-dioxolanosta-8,24-dien-26-oic acid; (15 α,23*S*,24*E*)-form

[化学名・別名] Ganolucidic acid D

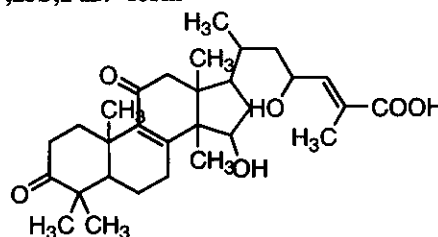
[CAS No.] 102607-22-7

[化合物分類] テルペノイド (Lanostane triterpenoid)

[構造式]

[基原] *Ganoderma lucidum* の代謝物

[比旋光度]: [α]_D²⁷ +192 (c, 0.1 in EtOH)



-----文献-----

Nishitoba, T. et al., Agric. Biol. Chem., 1986, 50, 809; 1988, 52, 367

§ 3,7-Dihydroxylanosta-8,24-dien-26-oic acid; (3 α ,7 α ,24E)-form

[化学名・別名] Ganoderic acid T. Ganoderic acid U

[CAS No.] 86377-51-7

[化合物分類] テルペノイド (Lanostane triterpenoid)

[構造式]

[基原] *Ganoderma lucidum*

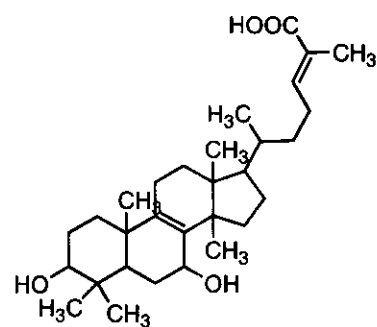
[用途] 細胞毒性

[性状] 結晶

[融点] Mp 196-199 °C

[比旋光度]: $[\alpha]_D +35$

[溶解性] メタノール, ジクロロメタンに可溶; 水に難溶



-----文献-----

Toth, J.O. et al., J. Chem. Res., Miniprint, 1983, 2722, (分離, H-NMR)

Toth, J.O. et al., Tet. Lett., 1983, 24, 1081

Wang, F.S. et al., Yaoxue Xuebao, 1997, 32, 447, (Ganoderic acid DM)

§ 3,7-Dihydroxylanosta-8,24-dien-26-oic acid; (3 β ,7 α ,24E)-form, 3-Epimer, 7-deoxy

[化学名・別名] Ganoderic acid Z. 3 β -Hydroxylanosta-8,24E-dien-27-oic acid

[CAS No.] 86420-19-1

[化合物分類] テルペノイド (Lanostane triterpenoid)

[構造式]

[分子式] C₃₀H₄₈O₃

[分子量] 456.707

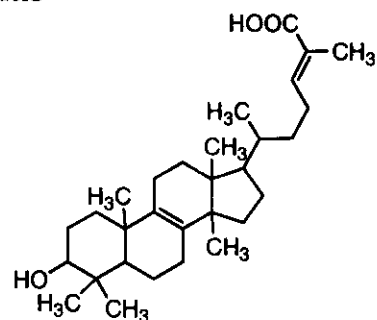
[正確な分子量] 456.360345

[基原] 次の植物から分離: *Ganoderma lucidum*

[用途] 細胞毒性

[UV]: [neutral] λ_{max} 215 (ϵ 12500) (MeOH) [neutral] λ_{max} 215

(EtOH)



-----文献-----

Toth, J.O. et al., J. Chem. Res., Miniprint, 1983, 2722, (分離, H-NMR)

Toth, J.O. et al., Tet. Lett., 1983, 24, 1081

Wang, F.S. et al., Yaoxue Xuebao, 1997, 32, 447, (Ganoderic acid DM)

§ 3,15-Dihydroxylanosta-8,24-dien-26-oic acid; (3 β ,15 α ,24E)-form, Di-Ac

[化学名・別名] 3 β ,15 α -Diacetoxylanosta-8,24-dien-26-oic acid

[CAS No.] 117842-20-3

[化合物分類] テルペノイド (Lanostane triterpenoid)

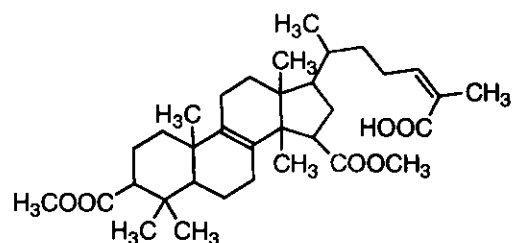
[構造式]

[分子式] C₃₄H₅₂O₆

[分子量] 556.781

[正確な分子量] 556.37639

[基原] *Ganoderma lucidum*



-----文献-----

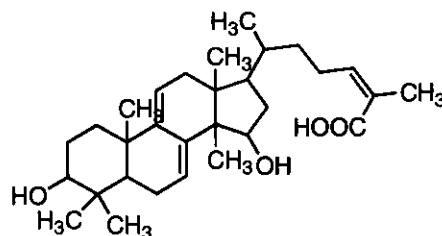
Lin, L.-J. et al., J. Nat. Prod., 1988, 51, 919

§ 3,15-Dihydroxylanosta-7,9(11),24-trien-26-oic acid; (3 α ,5 α ,15 α ,24E)-form

[化学名・別名] Ganodermic acid Ja

[CAS No.] 112430-67-8

[構造式]



[化合物分類]テルペノイド (Lanostane triterpenoid)

[基原] *Ganoderma lucidum* の代謝物

-----文献-----

Nishitoba, T. et al., Agric. Biol. Chem., 1987, 51, 619, (分離)

Shiao, M.-S. et al., J. Nat. Prod., 1987, 50, 886, (分離)

Lin, L.-J. et al., Phytochemistry, 1988, 27, 2269

§ 3,15-Dihydroxylanosta-7,9(11),24-trien-26-oic acid; (3 α ,5 α ,15 α ,24E)-form, 3-Ac

[化学名・別名] 3 α -Acetoxy-15 α -hydroxylanosta-7,9(11),24E-trien-26-oic acid. Ganoderic acid Mf

[CAS No.] 108026-94-4

[化合物分類]テルペノイド (Lanostane triterpenoid)

[構造式]

[分子式] C₃₂H₄₈O₅

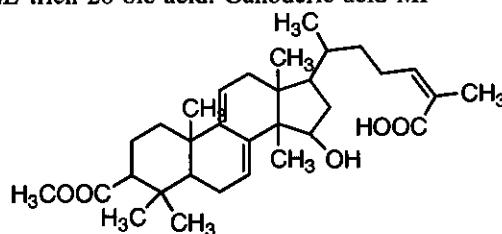
[分子量] 512.728

[正確な分子量] 512.350175

[基原] *Ganoderma lucidum* の代謝物

[性状]シロップ

[比旋光度]: $[\alpha]_D^{24} +42$ (c, 0.2 in CHCl₃)



-----文献-----

Nishitoba, T. et al., Agric. Biol. Chem., 1987, 51, 619, (分離)

Shiao, M.-S. et al., J. Nat. Prod., 1987, 50, 886, (分離)

Lin, L.-J. et al., Phytochemistry, 1988, 27, 2269

§ 3,15-Dihydroxylanosta-7,9(11),24-trien-26-oic acid; (3 α ,5 α ,15 α ,24E)-form, 15-Ac

[化学名・別名] 15 α -Acetoxy-3 α -hydroxylanosta-7,9(11),24E-trien-26-oic acid. Ganoderic acid X

[CAS No.] 86377-53-9

[化合物分類]テルペノイド (Lanostane triterpenoid)

[構造式]

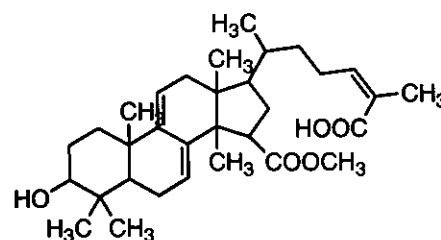
[分子式] C₃₂H₄₈O₅

[分子量] 512.728

[正確な分子量] 512.350175

[基原] *Ganoderma lucidum* の代謝物

[UV]:[neutral] λ_{max} 220 ; 233 ; 242 ; 251 (EtOH)



-----文献-----

Nishitoba, T. et al., Agric. Biol. Chem., 1987, 51, 619, (分離)

Shiao, M.-S. et al., J. Nat. Prod., 1987, 50, 886, (分離)

Lin, L.-J. et al., Phytochemistry, 1988, 27, 2269

§ 3,15-Dihydroxylanosta-7,9(11),24-trien-26-oic acid; (3 α ,5 α ,15 α ,24E)-form, Di-Ac

[化学名・別名] 3 α ,15 α -Diacetoxylanosta-7,9(11),24E-trien-26-oic acid. Ganoderic acid Me. Ganodermic acid R

[CAS No.] 108026-93-3

[化合物分類]テルペノイド (Lanostane triterpenoid)

[構造式]

[分子式] C₃₄H₅₀O₆

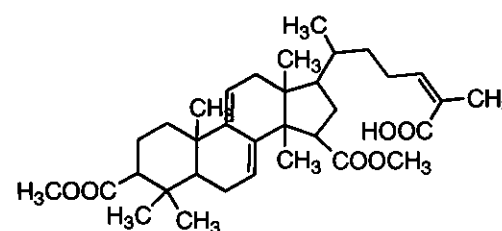
[分子量] 554.765

[正確な分子量] 554.6074

[基原] *Ganoderma lucidum* の代謝物

[性状]シロップもしくは無定形の粉末 (CHCl₃/hexane)

[融点]Mp 126-129 °C



[比旋光度]: $[\alpha]_D^{24} +53$ (c, 0.26 in MeOH)

-----文献-----

Nishitoba, T. et al., Agric. Biol. Chem., 1987, 51, 619, (分離)

Shiao, M.-S. et al., J. Nat. Prod., 1987, 50, 886, (分離)

Lin, L.-J. et al., Phytochemistry, 1988, 27, 2269

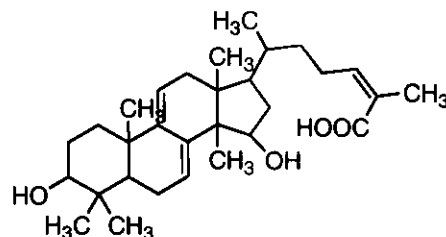
§ 3,15-Dihydroxylanosta-7,9(11),24-trien-26-oic acid; (3 β ,5 α ,15 α ,24E)-form

[化学名・別名] Ganodermic acid Jb

[CAS No.] 112430-68-9

[化合物分類] テルペノイド (Lanostane triterpenoid)

[構造式]



[基原] *Ganoderma lucidum* の代謝物

[性状] 結晶

[融点] Mp 201-202 °C

-----文献-----

Nishitoba, T. et al., Agric. Biol. Chem., 1987, 51, 619, (分離)

Shiao, M.-S. et al., J. Nat. Prod., 1987, 50, 886, (分離)

Lin, L.-J. et al., Phytochemistry, 1988, 27, 2269

§ 3,15-Dihydroxylanosta-7,9(11),24-trien-26-oic acid; (3 β ,5 α ,15 α ,24E)-form, 3-Ac

[化学名・別名] 3 β -Acetoxy-15 α -hydroxy-7,9(11),24-lanostatien-26-oic acid. Ganodermic acid TO

[CAS No.] 112430-65-6

[化合物分類] テルペノイド (Lanostane triterpenoid)

[構造式]

[分子式] C₃₂H₄₈O₅

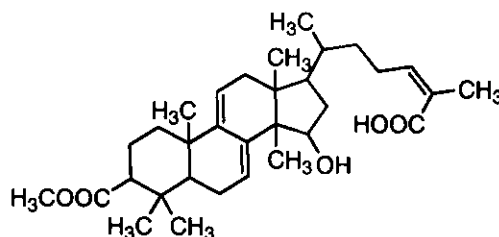
[分子量] 512.728

[正確な分子量] 512.350175

[基原] *Ganoderma lucidum* の代謝物

[性状] 結晶

[融点] Mp 160-162 °C



-----文献-----

Nishitoba, T. et al., Agric. Biol. Chem., 1987, 51, 619, (分離)

Shiao, M.-S. et al., J. Nat. Prod., 1987, 50, 886, (分離)

Lin, L.-J. et al., Phytochemistry, 1988, 27, 2269

§ 3,15-Dihydroxylanosta-7,9(11),24-trien-26-oic acid; (3 β ,5 α ,15 α ,24E)-form, 15-Ac

[化学名・別名] 15 α -Acetoxy-3 β -hydroxy-7,9(11),24-lanostatien-26-oic acid. Ganodermic acid TN

[CAS No.] 112430-64-5

[化合物分類] テルペノイド (Lanostane triterpenoid)

[構造式]

[分子式] C₃₂H₄₈O₅

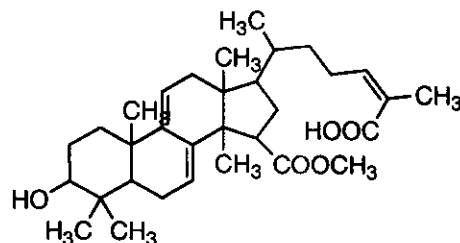
[分子量] 512.728

[正確な分子量] 512.350175

[基原] *Ganoderma lucidum* の代謝物

[性状] 結晶

[融点] Mp 145-146 °C



-----文献-----

Nishitoba, T. et al., Agric. Biol. Chem., 1987, 51, 619, (分離)

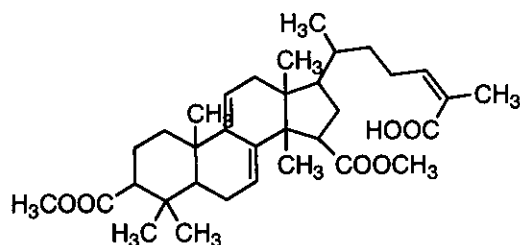
Shiao, M.-S. et al., J. Nat. Prod., 1987, 50, 886, (分離)

Lin, L.-J. et al., Phytochemistry, 1988, 27, 2269

§ 3,15-Dihydroxylanosta-7,9(11),24-trien-26-oic acid; (3 β ,5 α ,15 α ,24E)-form, Di-Ac

[化学名・別名] 3 β ,15 α -Diacetoxy-7,9(11),24E-trien-26-oic acid. Ganodermic acid S

[CAS No.] 112430-63-4
 [化合物分類] テルペノイド (Lanostane triterpenoid)
 [構造式]
 [分子式] $C_{34}H_{50}O_6$
 [分子量] 554.765
 [正確な分子量] 554.36074
 [基原] *Ganoderma lucidum* の代謝物
 [性状] 針状結晶 ($CHCl_3$ /hexane)
 [融点] Mp 123-124 °C
 [UV]: [neutral] λ_{max} 235 ; 243 ; 252 (MeOH)



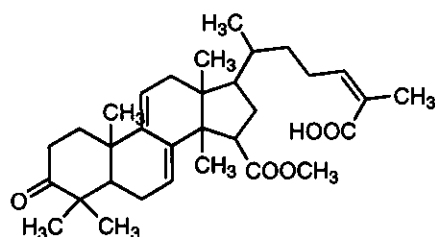
-----文献-----

Nishitoba, T. et al., *Agric. Biol. Chem.*, 1987, 51, 619, (分離)
 Shiao, M.-S. et al., *J. Nat. Prod.*, 1987, 50, 886, (分離)
 Lin, L.-J. et al., *Phytochemistry*, 1988, 27, 2269

§ 3,15-Dihydroxylanosta-7,9(11),24-trien-26-oic acid; (3β,5α,15α,24E)-form, 3-Ketone, 15-Ac

[化学名・別名] 15-Acetoxy-3-oxo-7,9(11),24-lanostatrien-26-oic acid. Ganodermic acid TQ

[CAS No.] 112430-66-7
 [化合物分類] テルペノイド (Lanostane triterpenoid)
 [構造式]
 [分子式] $C_{32}H_{46}O_5$
 [分子量] 510.712
 [正確な分子量] 510.334525
 [基原] *Ganoderma lucidum* の代謝物



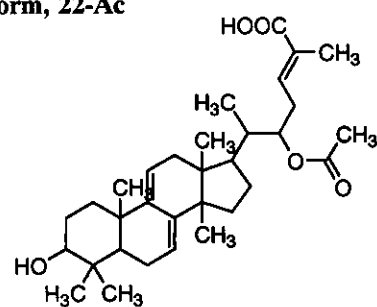
-----文献-----

Nishitoba, T. et al., *Agric. Biol. Chem.*, 1987, 51, 619, (分離)
 Shiao, M.-S. et al., *J. Nat. Prod.*, 1987, 50, 886, (分離)
 Lin, L.-J. et al., *Phytochemistry*, 1988, 27, 2269

§ 3,22-Dihydroxylanosta-7,9(11),24-trien-26-oic acid; (3α,22S,24E)-form, 22-Ac

[化学名・別名] Ganoderic acid S

[化合物分類] テルペノイド (Lanostane triterpenoid)
 [構造式]
 [分子式] $C_{32}H_{48}O_5$
 [分子量] 512.728
 [正確な分子量] 512.350175
 [基原] *Ganoderma lucidum* の菌糸体培養
 [性状] 針状結晶
 [融点] Mp 194-196 °C



[比旋光度]: $[\alpha]_D^{25} +19.8$ (c, 0.085 in $CHCl_3$)

[溶解性] メタノール, クロロホルムに可溶; 水に難溶

[UV]: [neutral] λ_{max} 231 (ϵ 15800); 240 (ϵ 15600); 248 (ϵ 10000) (MeOH)

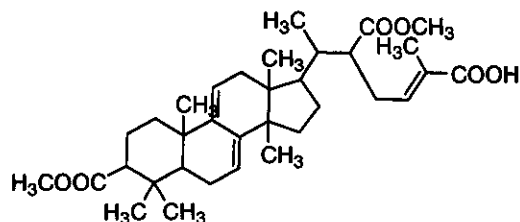
-----文献-----

Hirotsani, M. et al., *Phytochemistry*, 1987, 26, 2797
 Hirotsani, M. et al., *J.C.S. Perkin 1*, 1990, 2751, (生合成)

§ 3,22-Dihydroxylanosta-7,9(11),24-trien-26-oic acid; (3α,22S,24E)-form, Di-Ac

[化学名・別名] Ganoderic acid R

[CAS No.] 103963-39-9
 [化合物分類] テルペノイド (Lanostane triterpenoid)
 [構造式]
 [分子式] $C_{34}H_{50}O_6$
 [分子量] 554.765
 [正確な分子量] 554.36074
 [基原] *Ganoderma lucidum* の菌糸体培養



[性状] 針状結晶

[融点] Mp 201-202 °C

[比旋光度]: $[\alpha]_D +8.7$ (c, 0.092 in CHCl₃)

[溶解性] メタノール, クロロホルムに可溶; 水に難溶

[UV]: [neutral] λ_{max} 224 (ϵ 10000); 234 (ϵ 10000); 242 (ϵ 10000); 250 (ϵ 6300) (MeOH)

-----文献-----

Hirotani, M. et al., *Phytochemistry*, 1987, 26, 2797

Hirotani, M. et al., *J.C.S. Perkin 1*, 1990, 2751, (生合成)

§ 3,15-Dihydroxy-23-oxo-7,9(11),24-lanostatrien-26-oic acid; (3 α ,15 α ,24E)-form, 3-Ac

[化学名・別名] 3 α -Acetoxy-15 α -hydroxy-23-oxo-7,9(11),24E-lanostatrien-26-oic acid

[CAS No.] 117383-37-6

[化合物分類] テルペノイド (Lanostane triterpenoid)

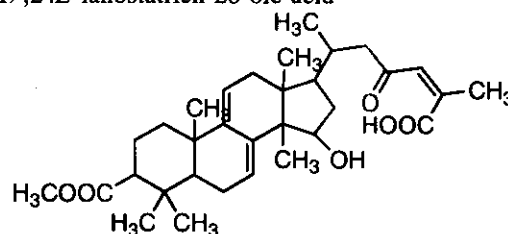
[構造式]

[分子式] C₅₂H₈₀O₆

[分子量] 526.712

[正確な分子量] 526.32944

[基原] *Ganoderma lucidum*



-----文献-----

Shiao, M.-S. et al., *Phytochemistry*, 1988, 27, 2911

§ 3,15-Dihydroxy-23-oxo-7,9(11),24-lanostatrien-26-oic acid; (3 α ,15 α ,24E)-form, 15-Ac

[化学名・別名] 15 α -Acetoxy-3 α -hydroxy-23-oxo-7,9(11),24E-lanostatrien-26-oic acid

[CAS No.] 117383-35-4

[化合物分類] テルペノイド (Lanostane triterpenoid)

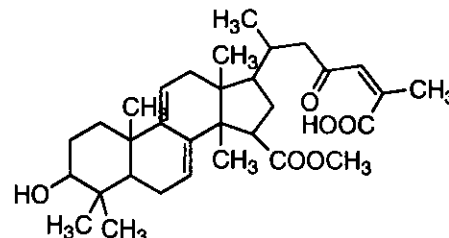
[構造式]

[分子式] C₅₂H₈₀O₆

[分子量] 526.712

[正確な分子量] 526.32944

[基原] *Ganoderma lucidum*



-----文献-----

Shiao, M.-S. et al., *Phytochemistry*, 1988, 27, 2911

§ 3,15-Dihydroxy-23-oxo-7,9(11),24-lanostatrien-26-oic acid; (3 α ,15 α ,24E)-form, Di-Ac

[化学名・別名] 3 α ,15 α -Diacetoxy-23-oxo-7,9(11),24E-lanostatrien-26-oic acid

[CAS No.] 117383-36-5

[化合物分類] テルペノイド (Lanostane triterpenoid)

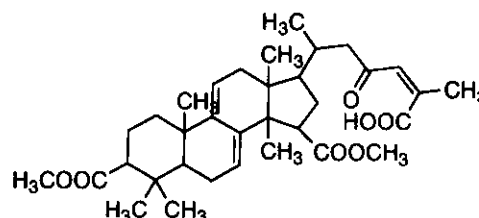
[構造式]

[分子式] C₅₄H₈₀O₇

[分子量] 568.749

[正確な分子量] 568.340005

[基原] *Ganoderma lucidum*

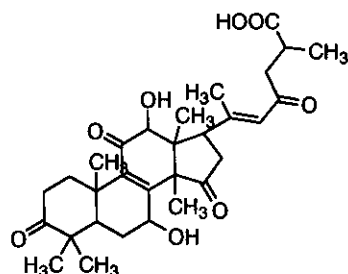


-----文献-----

Shiao, M.-S. et al., *Phytochemistry*, 1988, 27, 2911

§ 7,12-Dihydroxy-3,11,15,23-tetraoxolanosta-8,20(22)-dien-26-oic acid; (7 β ,12 β ,20(22)E)-form

[化学名・別名] Ganoderenic acid E
 [CAS No.] 110241-23-1
 [化合物分類] テルペノイド (Lanostane triterpenoid)
 [構造式]



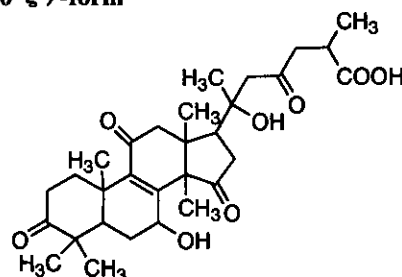
[基原] *Ganoderma lucidum*
 [性状] 結晶 (EtOAc/MeOH) (as Me ester)
 [融点] Mp 227-229 °C (Me ester)

-----文献-----

Nishitoba, T. et al., *Phytochemistry*, 1987, 26, 1777

§ 7,20-Dihydroxy-3,11,15,23-tetraoxolanost-8-en-26-oic acid; (7 β,20 ξ)-form

[化学名・別名] Ganoderic acid N
 [CAS No.] 110241-19-5
 [化合物分類] テルペノイド (Lanostane triterpenoid)
 [構造式]



[基原] *Ganoderma lucidum*
 [性状] 結晶 (EtOAc/cyclohexane) (as Me ester)
 [融点] Mp 164-167 °C (Me ester)
 [比旋光度]: [α]_D²⁴ +153 (c, 0.2 in MeOH) (Me ester)

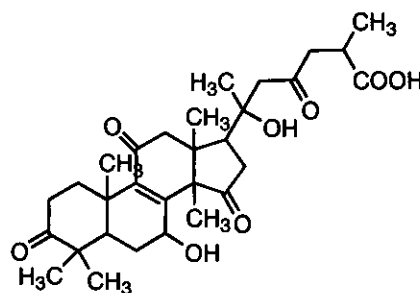
-----文献-----

Nishitoba, T. et al., *Phytochemistry*, 1987, 26, 1777

§ 7,20-Dihydroxy-3,11,15,23-tetraoxolanost-8-en-26-oic acid; (7 β,20 ξ)-form, 7-Ketone

[化学名・別名] Ganoderic acid O. 20 ξ-Hydroxy-3,7,11,15,23-pentaoxolanost-8-en-26-oic acid
 [CAS No.] 110241-21-9

[化合物分類] テルペノイド (Lanostane triterpenoid)
 [構造式]



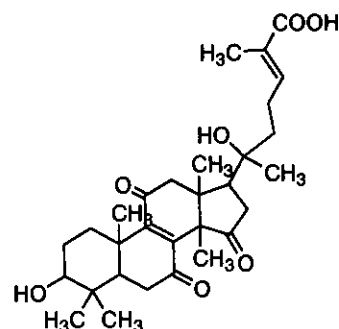
[分子式] C₃₀H₄₀O₈
 [分子量] 528.641
 [正確な分子量] 528.27232
 [基原] *Ganoderma lucidum*
 [性状] 青白い黄色の針状結晶 (Et₂O/hexane) (as Me ester)
 [融点] Mp 168-171 °C (Me ester)

-----文献-----

Nishitoba, T. et al., *Phytochemistry*, 1987, 26, 1777

§ 3,20-Dihydroxy-7,11,15-trioxolanosta-8,24-dien-26-oic acid; (3 β,20 ξ,24E)-form

[化学名・別名] Ganoderic acid V₁
 [CAS No.] 150033-91-3
 [化合物分類] テルペノイド (Lanostane triterpenoid)
 [構造式]



[基原] *Ganoderma lucidum* の代謝物
 [性状] 結晶
 [融点] Mp 234-234.5 °C
 [比旋光度]: [α]_D²¹ +100 (c, 0.12 in CHCl₃)

-----文献-----

Hirofani, M. et al., *Phytochemistry*, 1993, 33, 379, (分離, H-NMR, C13-NMR)

§ 3,7-Dihydroxy-11,15,23-trioxolanost-8-en-26-oic acid; (3 β ,7 β)-form

[化学名・別名] Ganoderic acid B

[CAS No.] 81907-61-1

[化合物分類] テルペノイド (Lanostane triterpenoid)

[構造式]

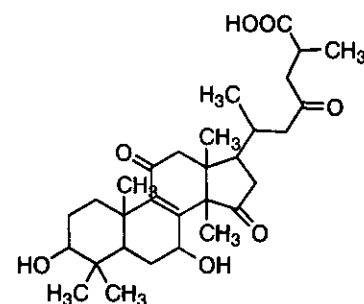
[基原] *Ganoderma lucidum*

[性状] 無定型の粉末

[溶解性] メタノール, 塩基, クロロホルムに可溶; 水, ヘキサンに難溶

-----文献-----

Kubota, T. et al., *Helv. Chim. Acta*, 1982, 65, 611



§ 7,15-Dihydroxy-3,11,23-trioxolanost-8-en-26-oic acid; (7 β ,15 α)-form

[化学名・別名] Ganoderic acid A

[CAS No.] 81907-62-2

[化合物分類] テルペノイド (Lanostane triterpenoid)

[構造式]

[基原] *Ganoderma lucidum*

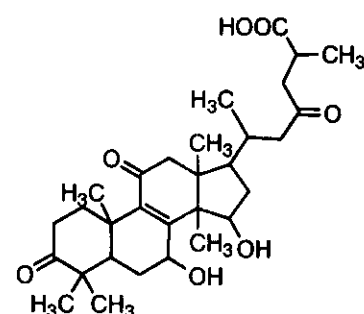
[性状] 無定型の粉末

[比旋光度]: $[\alpha]_D^{27} +153.8$ (c, 0.156 in CHCl₃)

[溶解性] メタノール, 塩基, クロロホルムに可溶; 水, ヘキサン, 酸に難溶

-----文献-----

Kubota, T. et al., *Helv. Chim. Acta*, 1982, 65, 611



§ 24,25-Epoxy-7,26-dihydroxylanost-8-en-3-one; (7 α ,24S,25S)-form

[化学名・別名] Epoxyganoderiol A

[CAS No.] 114020-56-3

[化合物分類] テルペノイド (Lanostane triterpenoid)

[構造式]

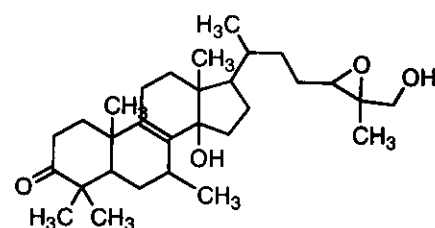
[基原] *Ganoderma lucidum* の代謝物

[性状] Gummy solid

[比旋光度]: $[\alpha]_D^{23} +65$ (c, 0.2 in CHCl₃)

-----文献-----

Nishitoba, T. et al., *Agric. Biol. Chem.*, 1988, 52, 211



§ 8,9-Epoxyergosta-5,22-diene-3,15-diol; (3 β ,8 ξ ,9 ξ ,15 ξ ,24 ξ)-form

[CAS No.] 133587-90-3

[化合物分類] ステロイド (Ergostane steroids; excluding withanolides and brassinolide). (C28)

[構造式]

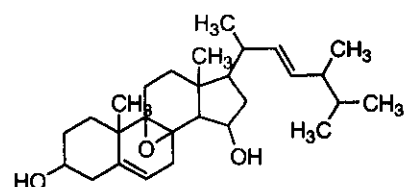
[基原] *Ganoderma lucidum*

[性状] 粉末

[融点] Mp 228-230 °C

-----文献-----

Chiang, H.-C. et al., *J. Chin. Chem. Soc. (Taipei)*, 1991, 38, 71, (分離, H-NMR, C13-NMR)



§ 24,25-Epoxylanosta-7,9(11)-diene-3,26-diol; (3 β ,24S,25S)-form

[化学名・別名] Epoxyganoderiol C

[CAS No.] 114020-58-5

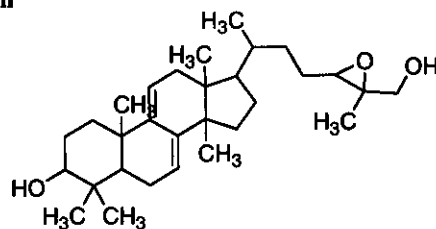
[化合物分類] テルペノイド (Lanostane triterpenoid)

[構造式]

[基原] *Ganoderma lucidum* の代謝物

[性状] シロップ

[比旋光度]: $[\alpha]_D^{25} +43$ (c, 0.2 in EtOH)



-----文献-----

Nishitoba, T. et al., Agric. Biol. Chem., 1988, 52, 211

§ 24,25-Epoxylanosta-7,9(11)-diene-3,26-diol; (3 β ,24S,25S)-form, 3-Ketone

[化学名・別名] 24S, 25S-Epoxy-26-hydroxylanosta-7,9(11)-dien-3-one. Epoxyganoderiol B

[CAS No.] 114020-57-4

[化合物分類] テルペノイド (Lanostane triterpenoid)

[構造式]

[分子式] C₃₀H₄₆O₃

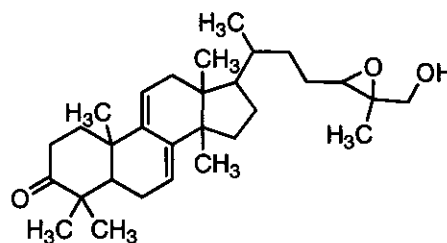
[分子量] 454.692

[正確な分子量] 454.344695

[基原] *Ganoderma lucidum* の代謝物

[性状] Strup.

[比旋光度]: $[\alpha]_D^{25} +35$ (c, 0.4 in EtOH)



-----文献-----

Nishitoba, T. et al., Agric. Biol. Chem., 1988, 52, 211

§ Ergosta-7,22-diene-2,3,9-triol; (2 β ,3 α ,9 α ,24R)-form

[化合物分類] ステロイド (Ergostane steroids; excluding withanolides and brassinolide). (C28)

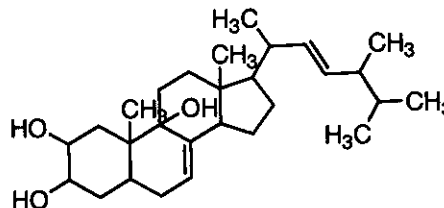
[構造式]

[基原] *Ganoderma lucidum* の代謝物

[性状] 針状結晶 (MeOH)

[融点] Mp 253 °C

[比旋光度]: $[\alpha]_D^{25} -7.2$ (c, 0.125 in MeOH)



-----文献-----

Lin, C.-N. et al., J. Nat. Prod., 1991, 54, 998, (分離, H-NMR, C13-NMR)

Lin, C.-N. et al., Phytochemistry, 1993, 32, 1549, (分離, H-NMR, C13-NMR)

§ Ergosta-4,7,22-triene-3,6-dione (CAS名)

[化学名・別名] Ganodosterone. 6-Ketoergosterone

[CAS No.] 19698-66-9

[化合物分類] ステロイド (Ergostane steroids; excluding withanolides and brassinolide). (C28),

[構造式]

[分子式] C₂₈H₄₀O₂

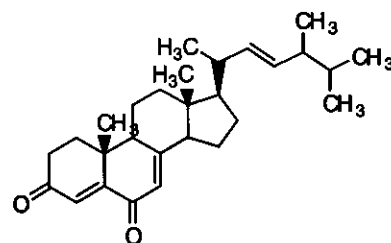
[分子量] 408.623

[正確な分子量] 408.30283

[基原] 次の植物から分離: 海綿類; *Raphidostila incisa*, カビ類; *Ganoderma lucidum*

[性状] 結晶

[融点] Mp 156-159 °C で分解. Mp 176-177 °C



-----文献-----

Malhotra, S.K. et al., J.A.C.S., 1968, 90, 6565, (合成法)

Malorni, A. et al., Nouv. J. Chim., 1978, 2, 351, (分離, 合成法)

Hirotsu, M. et al., Phytochemistry, 1987, 26, 2797, (分離, H-NMR)

Kovganko, N.V. et al., Khim. Prir. Soedin., 1999, 35, 354; Chem. Nat. Compd. (Engl. Transl.), 1999, 35, 320, (合成法)

§ Ganosporelactone B

[CAS No.] 138008-05-6

[化合物分類]テルペノイド (Lanostane triterpenoid)

[構造式]

[分子式] $C_{30}H_{42}O_7$

[分子量] 514.658

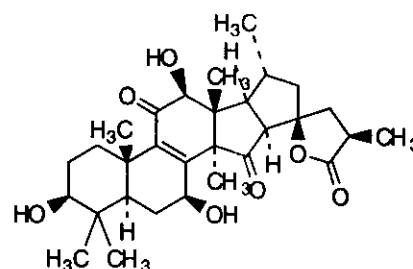
[正確な分子量] 514.293055

[基原] 次の植物から分離: *Ganoderma lucidum* の芽胞. 次に示す物質の成分: Chi Zhi

[性状] 結晶

[融点] Mp 235-237 °C

[比旋光度]: $[\alpha]_D^{25} +68.8$ (c, 0.08 in $CHCl_3$)



-----文献-----

Chen, R. et al., Yaoxue Xuebao, 1991, 26, 430-436

§ Ganosporelactone B; 3-Ketone

[化学名・別名] Ganosporelactone A

[化合物分類]テルペノイド (Lanostane triterpenoid)

[CAS No.] 138008-04-5

[構造式]

[分子式] $C_{30}H_{40}O_7$

[分子量] 512.642

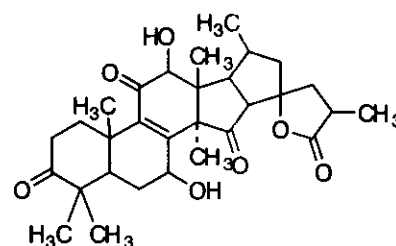
[正確な分子量] 512.277405

[基原] 次の植物から分離: *Ganoderma lucidum* の芽胞. 次に示す物質の成分: Chi Zhi

[性状] 結晶

[融点] Mp 238-240 °C

[比旋光度]: $[\alpha]_D^{25} +74.5$ (c, 0.06 in $CHCl_3$)



-----文献-----

Chen, R. et al., Yaoxue Xuebao, 1991, 26, 430-436

§ 15-Hydroxy-3,11-dioxo-8,24-lanostadien-26-oic acid; (15 α ,24E)-form

[化学名・別名] Ganolucidic acid E

[CAS No.] 114567-50-9

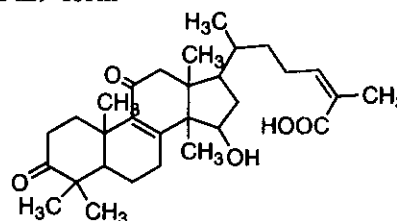
[化合物分類]テルペノイド (Lanostane triterpenoid)

[構造式]

[基原] *Ganoderma lucidum* の代謝物

[性状] シロップ (as Me ester)

[比旋光度]: $[\alpha]_D^{24} +154$ (c, 0.1 in MeOH) (Me ester)



-----文献-----

Nishitoba, T. et al., Agric. Biol. Chem., 1988, 52, 367, (分離, H-NMR, C13-NMR)

§ 6-Hydroxy-4,7,22-ergostatrien-3-one; (6 α ,22E)-form

[CAS No.] 114020-59-6

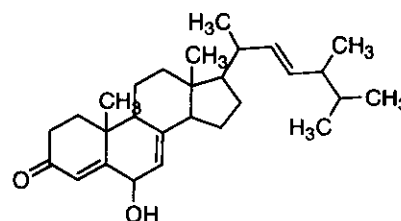
[化合物分類]ステロイド (Ergostane steroids;excluding withanolides and brassinolide). (C28),

[構造式]

[基原] *Ganoderma lucidum* の代謝物

[性状] シロップ

[比旋光度]: $[\alpha]_D^{23} -36$ (c, 0.1 in EtOH)



-----文献-----

Malorni, A. et al., Nouv. J. Chim., 1978, 2, 351, (合成法)

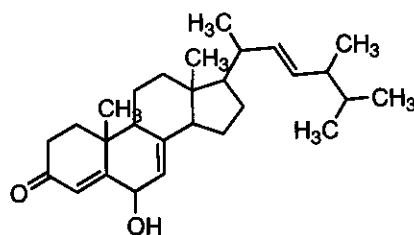
Nichitoba, T. et al., Agric. Biol. Chem., 1988, 52, 211, (分離)

§ 6-Hydroxy-4,7,22-ergostatrien-3-one; (6 β ,22E)-form

[CAS No.] 68378-35-8

[化合物分類]ステロイド (Ergostane steroids; withanolides と brassinolide を除いたステロイド). (C28)

[構造式]



[基原] *Ganoderma lucidum* の代謝物

[性状] シロップ

[比旋光度]: $[\alpha]_D^{23} -20$ (c, 0.1 in EtOH)

-----文献-----

Malorni, A. et al., Nouv. J. Chim., 1978, 2, 351, (合成法)

Nichitoba, T. et al., Agric. Biol. Chem., 1988, 52, 211, (分離)

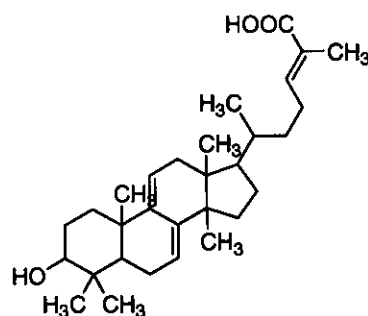
§ 3-Hydroxylanosta-7,9(11),24-trien-26-oic acid; (3 β ,24E)-form

[化学名・別名] Ganoderic acid Y

[CAS No.] 86377-52-8

[化合物分類]テルペノイド (Lanostane triterpenoid)

[構造式]



[基原] *Ganoderma lucidum*

[用途] 細胞毒

[溶解性] エタノールに可溶

[UV]: [neutral] λ_{max} 222 ; 235 ; 244 ; 252 (EtOH)

-----文献-----

Toth, J.O. et al., Tet. Lett., 1983, 24, 1081

§ 3-Hydroxy-11-oxolanosta-8,24-dien-26-al; 3 β -form

[CAS No.] 126313-85-7

[化合物分類]テルペノイド (Lanostane triterpenoid)

[構造式]

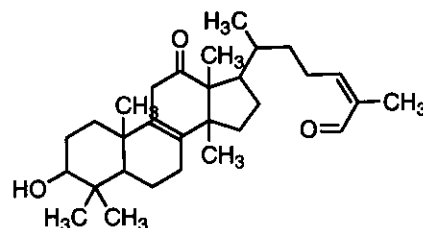
[基原] *Ganoderma lucidum* の代謝物

[性状] 針状結晶 (MeOH)

[融点] Mp 131-133 °C

[比旋光度]: $[\alpha]_D^{20} +248.4$ (c, 0.095 in CHCl₃)

-----文献-----



Lin, C.-N. et al., Phytochemistry, 1990, 29, 673, (分離, H-NMR, C13-NMR)

§ 7-Hydroxy-3-oxolanosta-8,24-dien-26-al; (7 α ,24E)-form

[化学名・別名] Ganoderal B

[CAS No.] 114020-55-2

[化合物分類]テルペノイド (Lanostane triterpenoid)

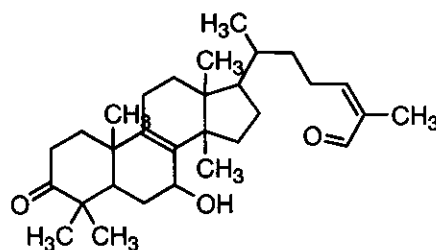
[構造式]

[基原] *Ganoderma lucidum* の代謝物

[性状] シロップ

[比旋光度]: $[\alpha]_D^{23} +94$ (c, 0.1 in EtOH)

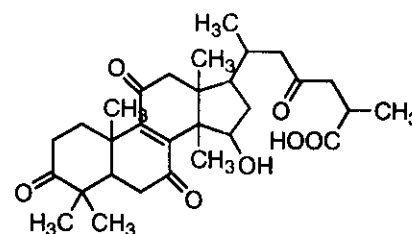
-----文献-----



Nishitoba, T. et al., Agric. Biol. Chem., 1988, 52, 211

§ 15-Hydroxy-3,7,11,23-tetraoxolanost-8-en-26-oic acid; (15 α ,25 ξ)-form

[化学名・別名] Ganoderic acid J
 [CAS No.] 100440-26-4
 [化合物分類] テルペノイド (Lanostane triterpenoid)
 [構造式]
 [分子式] $C_{30}H_{42}O_7$
 [分子量] 514.658
 [正確な分子量] 514.293055
 [基原] *Ganoderma lucidum* の代謝物

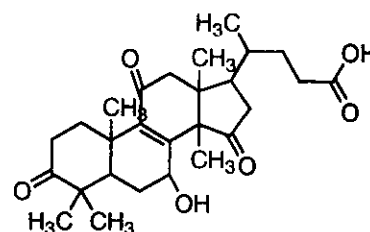


-----文献-----

Nishitoba, T. et al., Agric. Biol. Chem., 1985, 49, 3637, (分離, H-NMR, C13-NMR)

§ 7-Hydroxy-25,26,27-trinor-3,11,15-trioxo-8-lanosten-24-oic acid; 7 β -form

[化学名・別名] Lucidenic acid A
 [CAS No.] 95311-94-7
 [化合物分類] テルペノイド (Lanostane triterpenoid)
 [構造式]
 [基原] *Ganoderma lucidum* の代謝物
 [性状] 針状結晶 (EtOAc)
 [融点] Mp 194-195 °C
 [比旋光度]: $[\alpha]_D^{24} +173$ (c, 0.2 in $CHCl_3$)



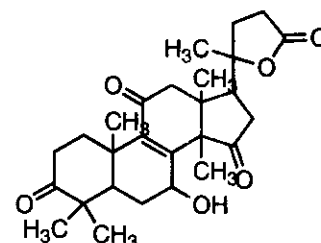
-----文献-----

Nishitoba, T. et al., Agric. Biol. Chem., 1984, 48, 2905; 1985, 49, 1793, (分離, H-NMR, C13-NMR)

Wu, T.-S. et al., J. Chin. Chem. Soc. (Taipei), 1997, 44, 157, (分離, H-NMR, C13-NMR, 結晶構造)

§ 7-Hydroxy-25,26,27-trinor-3,11,15-trioxo-8-lanosten-24,20-olide; (7 β, 20S)-form

[化学名・別名] Lucidenolactone
 [化合物分類] テルペノイド (Lanostane triterpenoid)
 [構造式]
 [基原] *Ganoderma lucidum* の代謝物
 [性状] 結晶 ($Me_2CO/MeOH$)
 [比旋光度]: $[\alpha]_D^{23} +85.4$ (c, 0.024 in $CHCl_3$)
 [UV]: [neutral] λ_{max} 256 (log ϵ 3.72) ($MeOH$)
 [その他のデータ] Mp >300 °C



-----文献-----

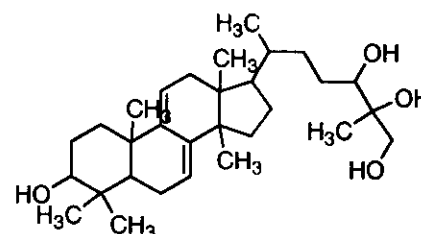
Wang, F.S. et al., Chin. Chem. Lett., 1995, 6, 1049, (分離, H-NMR, C13-NMR)

Wang, F.S. et al., Yaoxue Xuebao, 1996, 31, 200, (分離, H-NMR, C13-NMR)

Wu, T.-S. et al., J. Chin. Chem. Soc. (Taipei), 1997, 44, 157, (分離, H-NMR, C13-NMR, 結晶構造)

§ Lanosta-7,9(11)-diene-3,24,25,26-tetrol; 3 β -form

[化学名・別名] Ganoderiol A
 [化合物分類] テルペノイド (Lanostane triterpenoid)
 [構造式]
 [基原] *Ganoderma lucidum*
 [性状] 針状結晶 ($CHCl_3$)
 [融点] Mp 232-234 °C
 [比旋光度]: $[\alpha]_D^{23} +20$ (c, 0.1 in EtOH)



-----文献-----

Sato, H. et al., Agric. Biol. Chem., 1986, 50, 2887, (分離)

Fujita, A. et al., J. Nat. Prod., 1986, 49, 1122, (分離)

§ Lanosta-7,9(11)-diene-3,24,25,26-tetrol; 3 β -form, 3-Ketone

[化学名・別名] 24,25,26-Trihydroxylanosta-7,9(11)-dien-3-one. Ganodermanontriol
 [CAS No.] 106518-63-2

[化合物分類]テルペノイド (Lanostane triterpenoid)

[構造式]

[分子式] $C_{30}H_{48}O_4$

[分子量] 472.707

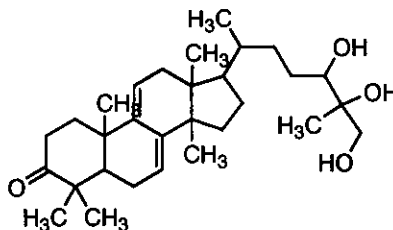
[正確な分子量] 472.35526

[基原] *Ganoderma lucidum*

[性状] 結晶

[融点] Mp 168-170 °C

[比旋光度]: $[\alpha]_D^{24} +41$ (c, 0.2 in MeOH)



-----文献-----

Sato, H. et al., Agric. Biol. Chem., 1986, 50, 2887, (分離)

Fujita, A. et al., J. Nat. Prod., 1986, 49, 1122, (分離)

§ Lanosta-7,9(11)-diene-3,24,25-triol; (3 β,24S)-form

[化学名・別名] Lucidumol B

[CAS No.] 107900-79-8

[化合物分類]テルペノイド (Lanostane triterpenoid)

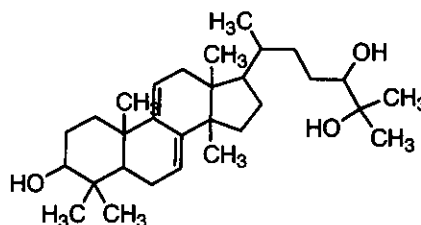
[構造式]

[基原] *Ganoderma lucidum*

[性状] 板状結晶 (CHCl₃)

[融点] Mp 209-211 °C

[比旋光度]: $[\alpha]_D +53$ (c, 0.04 in MeOH)



-----文献-----

Fujita, A. et al., J. Nat. Prod., 1986, 49, 1122, (Ganodermanndiol)

Min, B.S. et al., Chem. Pharm. Bull., 1998, 46, 1607, (Lucidumol B)

§ Lanosta-7,9(11)-diene-3,24,25-triol; (3 β,24S)-form, 3-Ketone

[化学名・別名] 24,25-Dihydroxylanost-7,9(11)-dien-3-one. Ganodermanndiol

[化合物分類]テルペノイド (Lanostane triterpenoid)

[構造式]

[分子式] $C_{30}H_{48}O_3$

[分子量] 456.707

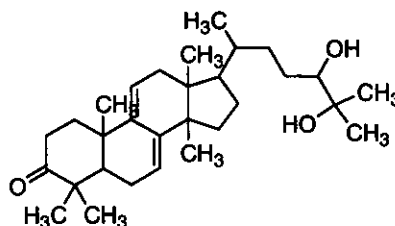
[正確な分子量] 456.360345

[基原] *Ganoderma lucidum*

[性状] 針状結晶 (MeOH)

[融点] Mp 182-183 °C

[比旋光度]: $[\alpha]_D^{23} +45.8$ (c, 0.5 in CHCl₃)



-----文献-----

Fujita, A. et al., J. Nat. Prod., 1986, 49, 1122, (Ganodermanndiol)

Min, B.S. et al., Chem. Pharm. Bull., 1998, 46, 1607, (Lucidumol B)

§ Lanosta-7,9(11),24-triene-3,26-diol; (3 β,24E)-form

[化学名・別名] Ganoderol B. Ganodermediol

[CAS No.] 104700-96-1

[化合物分類]テルペノイド (Lanostane triterpenoid)

[構造式]

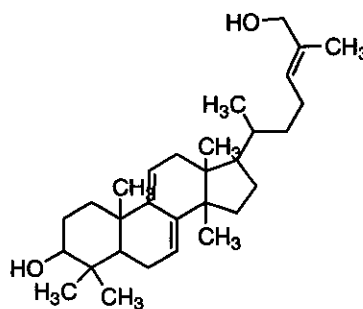
[基原] カビ類: *Ganoderma lucidum*

[用途] アンジオテンシン変換酵素抑制因子

[性状] 針状結晶 (MeOH)

[融点] Mp 171-173 °C

[比旋光度]: $[\alpha]_D^{25} +61$ (c, 0.18 in CHCl₃)



-----文献-----

Gaudamer, A. et al., Bull. Soc. Chim. Fr., 1967, 1844, (Tyromycic acid)

Morigiwa, A. et al., Chem. Pharm. Bull., 1986, 34, 3025, (分離)

Arisawa, M. et al., J. Nat. Prod., 1986, 49, 621; 1988, 51, 54, (分離, H-NMR, C13-NMR)

§ Lanosta-7,9(11),24-triene-3,26-diol; (3 β ,24E)-form, 3-Ketone

[化学名・別名] 26-Hydroxylanosta-7,9(11),24E-trien-3-one. Ganoderol A. Ganodermenonol

[CAS No.] 104700-97-2

[化合物分類] テルペノイド (Lanostane triterpenoid)

[構造式]

[分子式] C₃₀H₄₆O₂

[分子量] 438.692

[正確な分子量] 438.34978

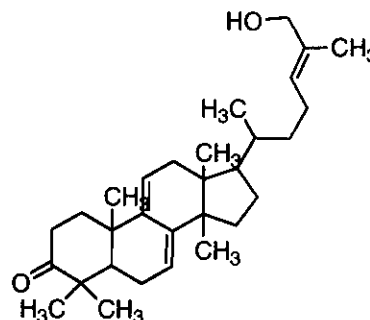
[基原] *Ganoderma lucidum*

[用途] アンギオテンシン変換酵素抑制因子

[性状] 葉状結晶 (MeOH)

[融点] Mp 109-111 °C (99-101 °C)

[比旋光度]: $[\alpha]_D^{25} +38.96$ (c, 1 in CHCl₃)



-----文献-----

Gaudamer, A. et al., Bull. Soc. Chim. Fr., 1967, 1844, (Tyromycic acid)

Morigiwa, A. et al., Chem. Pharm. Bull., 1986, 34, 3025, (分離)

Arisawa, M. et al., J. Nat. Prod., 1986, 49, 621; 1988, 51, 54, (分離, H-NMR, C13-NMR)

§ Lanosta-7,9(11),24-triene-3,26-diol; (3 β ,24E)-form, 3-Ketone, 26-aldehyde

[化学名・別名] 3-Oxolanosta-7,9(11),24E-trien-26-al. Ganoderal A

[CAS No.] 104700-98-3

[化合物分類] テルペノイド (Lanostane triterpenoid)

[構造式]

[分子式] C₃₀H₄₄O₂

[分子量] 436.676

[正確な分子量] 436.33413

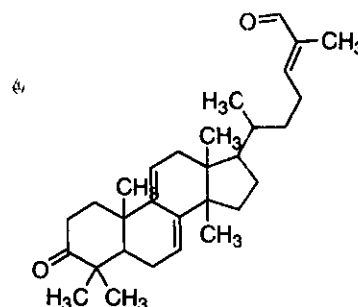
[基原] *Ganoderma lucidum*

[用途] アンギオテンシン変換酵素抑制因子

[性状] 葉状結晶 (MeOH)

[融点] Mp 127-128 °C

[比旋光度]: $[\alpha]_D^{25} +27$ (c, 0.21 in CHCl₃)



-----文献-----

Gaudamer, A. et al., Bull. Soc. Chim. Fr., 1967, 1844, (Tyromycic acid)

Morigiwa, A. et al., Chem. Pharm. Bull., 1986, 34, 3025, (分離)

Arisawa, M. et al., J. Nat. Prod., 1986, 49, 621; 1988, 51, 54, (分離, H-NMR, C13-NMR)

§ Lanosta-7,9(11),24-triene-3,26-diol; (3 β ,24E)-form, 3-Ketone, 26-carboxylic acid

[化学名・別名] 3-Oxolanosta-7,9(11),24E-trien-26-oic acid. Tyromycic acid. Ganoderic acid S

[CAS No.] 104759-35-5

[化合物分類] テルペノイド (Lanostane triterpenoid)

[構造式]

[分子式] C₃₀H₄₄O₃

[分子量] 452.676

[正確な分子量] 452.329045

[基原] *Ganoderma lucidum*

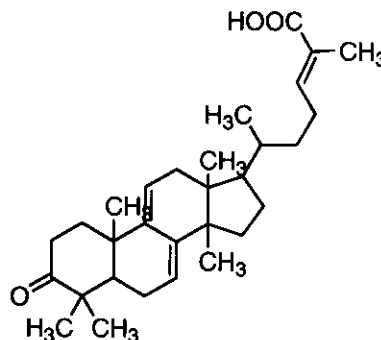
[用途] アンギオテンシン変換酵素抑制因子

[性状] 棒状の結晶 (MeOH)

[融点] Mp 173-175 °C (168-169 °C)

[比旋光度]: $[\alpha]_D +45$ (CHCl₃)

[UV]: [neutral] λ_{max} 226 (ϵ 13800); 233 (ϵ 1549); 243 (ϵ 17780); 252 (ϵ 9550) (MeOH)



-----文献-----

Gaudamer, A. et al., Bull. Soc. Chim. Fr., 1967, 1844, (Tyromycic acid)

Morigiwa, A. et al., Chem. Pharm. Bull., 1986, 34, 3025, (分離)

Arisawa, M. et al., J. Nat. Prod., 1986, 49, 621; 1988, 51, 54, (分離, H-NMR, C13-NMR)

§ Lanosta-7,9(11),24-triene-3,26,27-triol; 3 β-form

[化学名・別名] Ganoderatriol

[CAS No.] 105300-28-5

[化合物分類] テルペノイド (Lanostane triterpenoid)

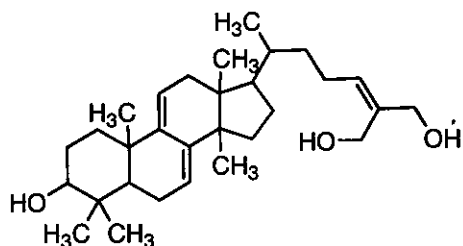
[構造式]

[基原] *Ganoderma lucidum*

[性状] 板状結晶

[融点] Mp 180-190 °C

[比旋光度]: $[\alpha]_D^{20} +9$ (c, 0.04 in EtOH)



----- 文献 -----

Sato, H. et al., Agric. Biol. Chem., 1986, 50, 2887, (分離)

Arisawa, M. et al., J. Nat. Prod., 1986, 49, 621; 1988, 51, 54, (分離, H-NMR, C13-NMR)

Nishitoba, T. et al., Agric. Biol. Chem., 1988, 52, 367, (Ganoderiol F)

§ Lanosta-7,9(11),24-triene-3,26,27-triol; 3 β-form, 3-Ketone

[化学名・別名] 26,27-Dihydroxylanosta-7,9(11),24-trien-3-one. Ganoderiol F

[CAS No.] 114567-47-4

[化合物分類] テルペノイド (Lanostane triterpenoid)

[構造式]

[分子式] C₃₀H₄₆O₃

[分子量] 454.692

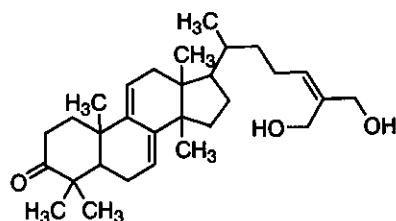
[正確な分子量] 454.344695

[基原] *Ganoderma lucidum* の代謝物

[性状] 青白い黄色の板状結晶 (CHCl₃/MeOH)

[融点] Mp 116-120 °C

[比旋光度]: $[\alpha]_D^{21} +42$ (c, 0.1 in MeOH)



----- 文献 -----

Sato, H. et al., Agric. Biol. Chem., 1986, 50, 2887, (分離)

Arisawa, M. et al., J. Nat. Prod., 1986, 49, 621; 1988, 51, 54, (分離, H-NMR, C13-NMR)

Nishitoba, T. et al., Agric. Biol. Chem., 1988, 52, 367, (Ganoderiol F)

§ Lucidenic acid D₁

[化学名・別名] 4,4,14-Trimethyl-3,7,11,12,15-pentaoxo-5 α-chol-8-en-24-oic acid (CAS 名).

3,7,11,12,15-Pentaoxo-25,26,27-trisnorlanost-8-en-24-oic acid

[CAS No.] 97653-95-7

[化合物分類] テルペノイド (Lanostane triterpenoid)

[構造式]

[分子式] C₂₇H₃₄O₇

[分子量] 470.561

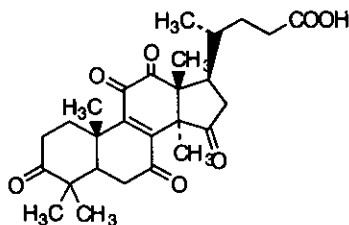
[正確な分子量] 470.230455

[基原] *Ganoderma lucidum*

[性状] 結晶

[融点] Mp 229-231 °C

[比旋光度]: $[\alpha]_D^{22} +84$ (c, 0.1 in EtOH)



----- 文献 -----

Nishitoba, T. et al., Agric. Biol. Chem., 1985, 49, 1547

§ Lucidenic acid E₁

[化学名・別名] 7 β,12 α-Dihydroxy-4,4,14-trimethyl-3,11,15-trioxochol-8-en-24-oic acid (CAS 名). 7 β,12 α-Dihydroxy-3,11,15-trioxo-25,26,27-trisnorlanost-8-en-24-oic acid

[CAS No.] 97673-89-7

[化合物分類] テルペノイド (Lanostane triterpenoid)

[構造式]

[分子式] $C_{27}H_{38}O_7$

[分子量] 474.593

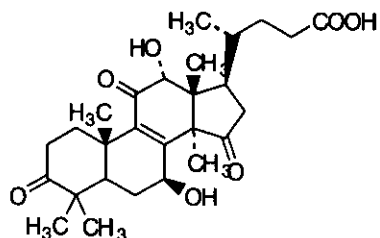
[正確な分子量] 474.261755

[基原] *Ganoderma lucidum*

[性状] 結晶 (EtOAc)

[融点] Mp 216-219 °C

[比旋光度]: $[\alpha]_D^{20} +229$ (c, 0.2 in MeOH)



-----文献-----

Nishitoba, T. et al., Agric. Biol. Chem., 1985, 49, 1547

§ Lucidenic acid E₂

[化学名・別名] 12 β -Acetoxy-3 β -hydroxy-4,4,14-trimethyl-7,11,15-trioxochol-8-en-24-oic acid (CAS 名).

12 β -Acetoxy-3 β -hydroxy-7,11,15-trioxo-25,26,27-trisnorlanost-8-en-24-oic acid. Lucidenic acid E

[CAS No.] 98665-17-9

[化合物分類] テルペノイド (Lanostane triterpenoid)

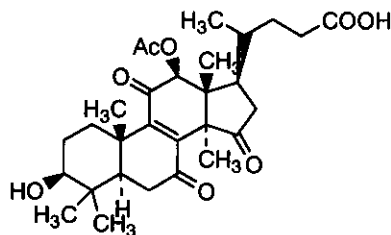
[構造式]

[分子式] $C_{29}H_{40}O_8$

[分子量] 516.63

[正確な分子量] 516.27232

[基原] *Ganoderma lucidum*



-----文献-----

Kikuchi, T. et al., Chem. Pharm. Bull., 1985, 33, 2624

Komodo, Y. et al., Chem. Pharm. Bull., 1985, 33, 4829, (Lucidenic acid D₂)

§ Lucidenic acid E₂; 3-Ketone

[化学名・別名] 12 β -Acetoxy-4,4,14-trimethyl-3,7,11,15-tetraoxochol-8-en-24-oic acid (CAS 名). 12 β

-Acetoxy-3,7,11,15-tetraoxo-25,26,27-trisnorlanost-8-en-24-oic acid. Lucidenic acid D₂. Lucidenic acid D

[CAS No.] 98665-16-8

[化合物分類] テルペノイド (Lanostane triterpenoid)

[構造式]

[分子式] $C_{29}H_{38}O_8$

[分子量] 514.614

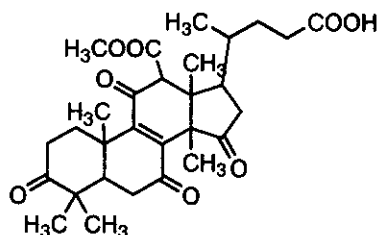
[正確な分子量] 514.25667

[基原] *Ganoderma lucidum*

[性状] 青白い黄色の無定型粉末

[比旋光度]: $[\alpha]_D^{22} +70.2$ (c, 0.62 in CHCl₃)

[UV]: [neutral] λ_{max} 253 (ϵ 9120) (EtOH)



-----文献-----

Kikuchi, T. et al., Chem. Pharm. Bull., 1985, 33, 2624

Komodo, Y. et al., Chem. Pharm. Bull., 1985, 33, 4829, (Lucidenic acid D₂)

§ Lucidenic acid E₂; Deacetoxy, 3-ketone

[化学名・別名] 4,4,14-Trimethyl-3,7,11,15-tetraoxochol-8-en-24-oic acid (CAS 名).

3,7,11,15-Tetraoxo-25,26,27-trisnorlanost-8-en-24-oic acid. Lucidenic acid F

[CAS No.] 98665-18-0

[化合物分類] テルペノイド (Lanostane triterpenoid)

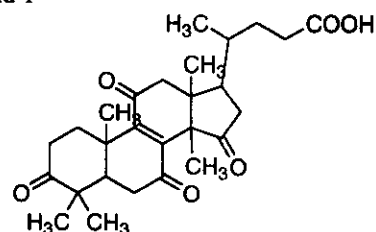
[構造式]

[分子式] $C_{27}H_{36}O_6$

[分子量] 456.578

[正確な分子量] 456.25119

[基原] *Ganoderma lucidum*



-----文献-----

Kikuchi, T. et al., Chem. Pharm. Bull., 1985, 33, 2624

Komodo, Y. et al., Chem. Pharm. Bull., 1985, 33, 4829, (Lucidenic acid D₂)

§ Lucidenic acid G

[化学名・別名] 7β,15α

,29-Trihydroxy-3,11-dioxo-25,26,27-trinorlanost-8-en-24-oic acid

[化合物分類] テルペノイド (Lanostane triterpenoid)

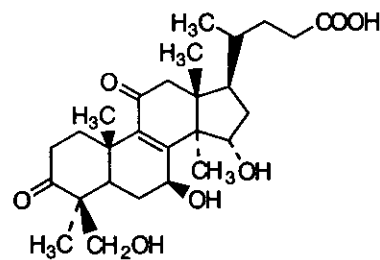
[構造式]

[分子式] C₂₇H₄₀O₇

[分子量] 476.609

[正確な分子量] 476.277405

[基原] *Ganoderma lucidum* の代謝物



-----文献-----

Nishitoba, T. et al., Agric. Biol. Chem., 1986, 50, 509

§ Lucidenic acid H

[化学名・別名] 3β,7β-Dihydroxy-4α-hydroxymethyl-4β,14α-dimethyl-11,15-dioxo-5α

-chol-8-en-24-oic acid (CAS名). 3β,7β,28-Trihydroxy-11,15-dioxo-25,26,27-trisnorlanost-8-en-24-oic acid

[CAS No.] 110241-25-3

[化合物分類] テルペノイド (Lanostane triterpenoid)

[構造式]

[分子式] C₂₇H₄₀O₇

[分子量] 476.609

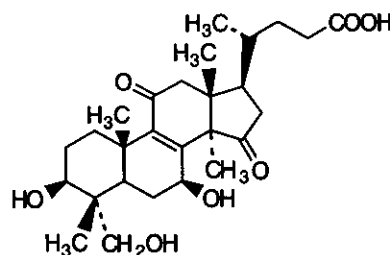
[正確な分子量] 476.277405

[基原] *Ganoderma lucidum*

[性状] 結晶 (EtOAc/hexane) (as Me ester)

[融点] Mp 190-192 °C (Me ester)

[比旋光度]: [α]_D²³ +136 (c, 0.2 in MeOH) (Me ester)



-----文献-----

Nishitoba, T. et al., Phytochemistry, 1987, 26, 1777

§ Lucidenic acid H; 7-Ketone

[化学名・別名] 3β-Hydroxy-4α-hydroxymethyl-4β,14α-dimethyl-7,11,15-trioxo-

5α-chol-8-en-24-oic acid (CAS名).

3β,28-Dihydroxy-7,11,15-trioxo-25,26,27-trisnorlanost-8-en-24-oic acid. Lucidenic acid I

[CAS No.] 110241-27-5

[化合物分類] テルペノイド (Lanostane triterpenoid)

[構造式]

[分子式] C₂₇H₃₆O₇

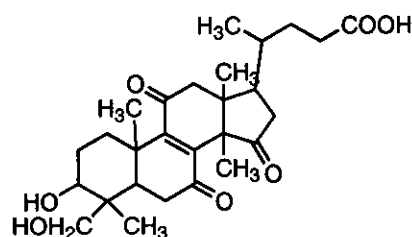
[分子量] 474.593

[正確な分子量] 474.261755

[基原] *Ganoderma lucidum*

[性状] 青白い黄色のシロップ (as Me ester)

[比旋光度]: [α]_D²³ +118 (c, 0.1 in MeOH) (Me ester)



-----文献-----

Nishitoba, T. et al., Phytochemistry, 1987, 26, 1777

§ Lucidenic acid H; 7-Ketone, 12β-Hydroxy

[化学名・別名] 3β,12β-Dihydroxy-4α-hydroxymethyl-4β,14α

-dimethyl-7,11,15-trioxo-5α-chol-8-en-24-oic acid (CAS名).

3β,12β,28-Trihydroxy-7,11,15-trioxo-25,26,27-trisnorlanost-8-en-24-oic

acid. Lucidenic acid J

[化合物分類] テルペノイド (Lanostane triterpenoid)

[構造式]

[分子式] C₂₇H₃₈O₈

[分子量] 490.592

