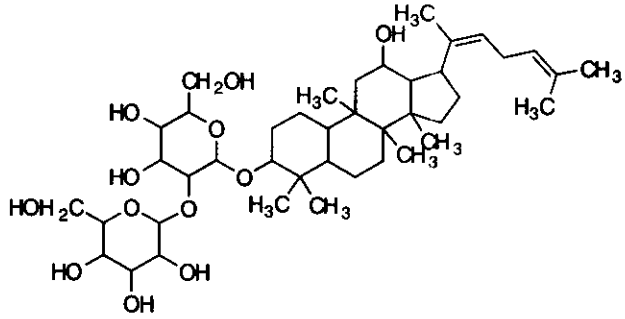
Hirakura, K. et al., Phytochemistry, 1991, 30, 3327,（分離, IR, UV, Mass, H-NMR, C13-NMR）

§ Dammara-20(22),24-diene-3,12-diol; (3 β,12 β,20*E*)-form, 3-*O*-[β-D-Glucopyranosyl-(1 → 2)-β-D-glucopyranoside]

[化学名・別名]Ginsenoside Rg_5

[化合物分類]テルペノイド(Dammarane triterpenoid)

[構造式]



[分子式]$C_{42}H_{70}O_{12}$

[分子量]767.008

[正確な分子量]766.48673

[基原]*Panax ginseng*

[性状]粉末（C_6H_6 /MeOH）

----------文献----------

Atopkina, L.N. et al., Carbohydr. Res., 1988, 177, 101,（合成法, H-NMR, C13-NMR）

Zhang, S. et al., Planta Med., 1990, 56, 298,（Ginsenoside Rh_3）

Kim, S.I. et al., Arch. Pharmacal Res., 1996, 19, 551,（Ginsenoside Rg_5）

Japan. Pat., 1996, 96 291 194,（Quasipanaxadiol）

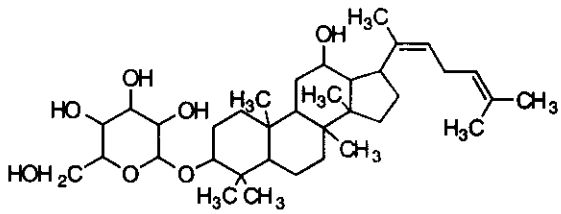
§ Dammara-20(22),24-diene-3,12-diol; (3 β,12 β,20*Z*)-form, 3-*O*-β-D-Glucopyranoside

[化学名・別名]Ginsenoside Rh_3

[CAS No.]105558-26-7

[化合物分類]テルペノイド(Dammarane triterpenoid)

[構造式]



[分子式]$C_{36}H_{60}O_7$

[分子量]604.866

[正確な分子量]604.433905

[基原]*Panax ginseng*

[性状]粉末

[融点]Mp 255-257 ℃

[比旋光度]:$[\alpha]_D^{27}$ +7 (c,0.78 in MeOH)

----------文献----------

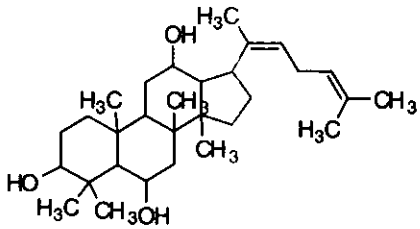
Zhang, S. et al., Planta Med., 1990, 56, 298,（Ginsenoside Rh_3）

Kim, S.I. et al., Arch. Pharmacal Res., 1996, 19, 551,（Ginsenoside Rg_5）

§ Dammara-20(22),24-diene-3,6,12-triol; (3 β,6 α,12 β,20*E*)-form

[化合物分類]テルペノイド(Dammarane triterpenoid)

[構造式]



[基原]Sapogenin from *Panax ginseng*

[性状]粉末（MeOH 溶液）

[融点]Mp 131-132 ℃

[比旋光度]:$[\alpha]_D$ +40 (c, 0.2 in MeOH)

----------文献----------

Zhang, S. et al., Planta Med., 1990, 56, 298

Ryu, J.H. et al., Arch. Pharmacal Res., 1996, 19, 335; CA, 125, 270438j,（20*E*-Ginsenoside F4）

Baek, N.-I. et al., Planta Med., 1996, 62, 86,（Giasenoxide Rh4）

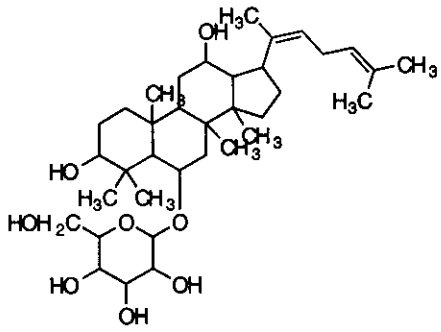
§ Dammara-20(22),24-diene-3,6,12-triol; (3 β,6 α,12 β,20*E*)-form, 6-*O*-β-D-Glucopyranoside

[化学名・別名]Ginsenoside Rh_4

[CAS No.]174721-08-5

[化合物分類]テルペノイド(Dammarane triterpenoid)

[構造式]



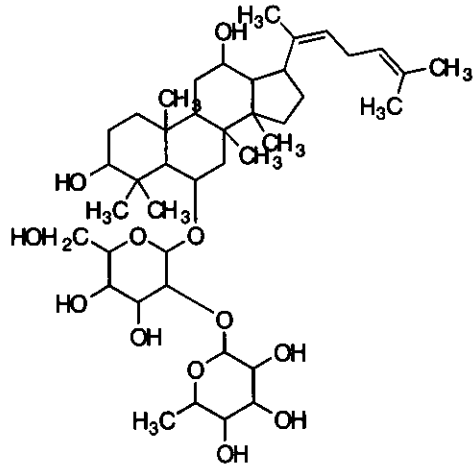
[分子式] $C_{36}H_{60}O_8$
[分子量] 620.865
[正確な分子量] 620.42882
[基原] *Panax ginseng*
[性状] 結晶(MeOH 溶液)
[融点] Mp 160-161 ℃
[比旋光度]: $[\alpha]_D$ +28.2 (c, 1.0 in MeOH)

----------文献----------

Zhang, S. et al., Planta Med., 1990, 56, 298
Ryu, J.H. et al., Arch. Pharmacal Res., 1996, 19, 335; CA, 125, 270438j, (20E-Ginsenoside F4)
Baek, N.-I. et al., Planta Med., 1996, 62, 86, (Giasenoxide Rh4)

§ Dammara-20(22),24-diene-3,6,12-triol; (3 β,6 α,12 β,20*E*)-form, 6-*O*-[α-L-Rhamnopyranosyl-(1 → 2)-β-D-glucopyranoside]

[化学名・別名] (20 E)-Ginsenoside F_4
[化合物分類] テルペノイド(Dammarane triterpenoid)
[構造式]



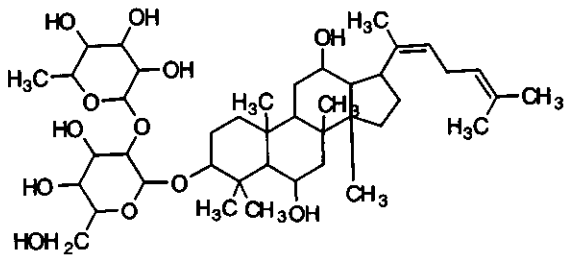
[分子式] $C_{42}H_{70}O_{12}$
[分子量] 767.008
[正確な分子量] 766.48673
[基原] *Panax ginseng*
[性状] 無定型の粉末
[融点] Mp 177-181 ℃
[比旋光度]: $[\alpha]_D^{22}$ -7.93 (c, 0.28 in MeOH)

----------文献----------

Zhang, S. et al., Planta Med., 1990, 56, 298
Ryu, J.H. et al., Arch. Pharmacal Res., 1996, 19, 335; CA, 125, 270438j, (20*E*-Ginsenoside F4)
Baek, N.-I. et al., Planta Med., 1996, 62, 86, (Giasenoxide Rh4)

§ Dammara-20(22),24-diene-3,6,12-triol; (3 β,6 α,12 β,20*Z*)-form, 6-*O*-[α-L-Rhamnopyranosyl-(1 → 2)-β-D-glucopyranoside]

[化学名・別名] Ginsenoside F_4. Ginsenoside Rg_4
[CAS No.] 126223-28-7
[化合物分類] テルペノイド(Dammarane triterpenoid)
[構造式]



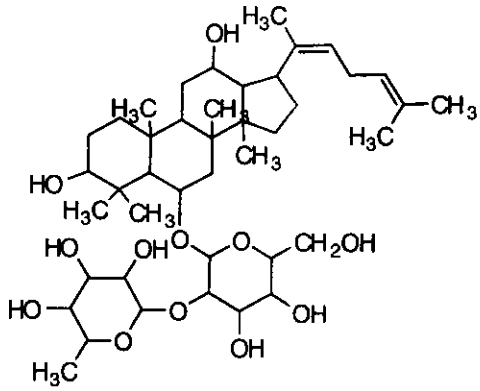
[分子式] $C_{42}H_{70}O_{12}$
[分子量] 767.008
[正確な分子量] 766.48673
[基原] *Panax ginseng*
[性状] 粉末
[融点] Mp 177-180 ℃
[比旋光度]: $[\alpha]_D^{20}$ -10.8 (c, 0.5 in MeOH)

----------文献----------

Zhang, S. et al., Planta Med., 1990, 56, 298
Ryu, J.H. et al., Arch. Pharmacal Res., 1996, 19, 335; CA, 125, 270438j, (20*E*-Ginsenoside F4)
Baek, N.-I. et al., Planta Med., 1996, 62, 86, (Giasenoxide Rh4)

§ Dammara-20,24-diene-3,6,12-triol; (3 β,6 α,12 β)-form, 6-*O*-[α-L-Rhamnopyranosyl-(1 → 2)-β

-D-glucopyranoside]
[化学名・別名]Ginsenoside Rg_6
[CAS No.]147419-93-0
[化合物分類]テルペノイド(Dammarane triterpenoid)
[構造式]

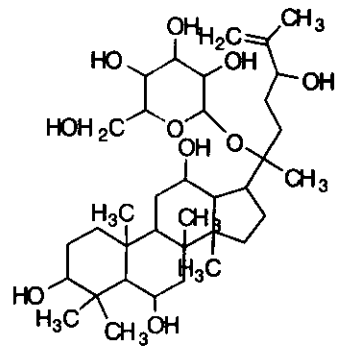


[分子式]$C_{42}H_{70}O_{12}$
[分子量]767.008
[正確な分子量]766.48673
[基原]*Panax ginseng*
[性状]無定型
[融点]Mp 173-176 ℃
[比旋光度]:$[\alpha]_D^{23}$ -9.48 (c, 0.28 in MeOH)

----------文献----------

Zhao, Y.Q. et al., Chin. Chem. Lett., 1992, 3, 887
Rya, J.-H. et al., Phytochemistry, 1997, 44, 931, (Ginsenoside Rg_6)

§ Dammar-25-ene-3,6,12,20,24-pentol; (3 β,6 α,12 β,20*S*,24 ξ)-form, 20-*O*-β-D-Glucopyranoside
[化学名・別名]Ginsenoside M_{7a}
[CAS No.]69987-14-0
[化合物分類]テルペノイド(Dammarane triterpenoid)
[構造式]

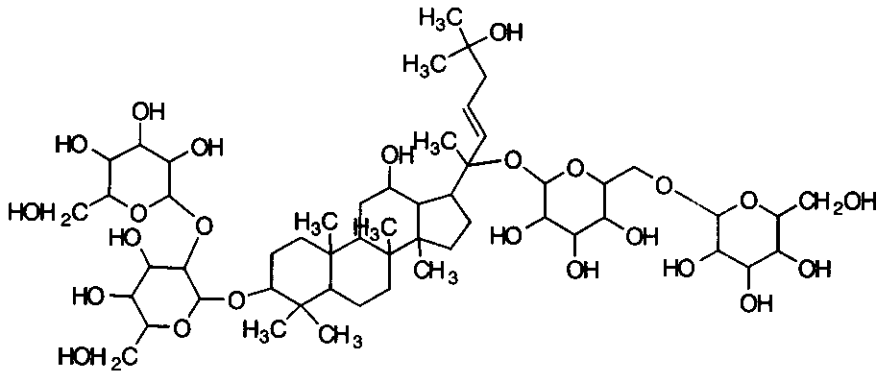


[分子式]$C_{36}H_{62}O_{10}$
[分子量]654.88
[正確な分子量]654.4343
[基原]次の植物から分離:*Panax ginseng*
[性状]粉末 + $1 \cdot 1/2H_2O$
[比旋光度]:$[\alpha]_D^{21}$ +29 (c, 0.33 in MeOH)

----------文献----------

Yahara, S. et al., Chem. Pharm. Bull., 1979, 27, 88

§ Dammar-22-ene-3,12,20,25-tetrol; (3 β,12 β,20*S*,22*E*)-form, 3-*O*-[β-D-Glucopyranosyl-(1 → 2)-β-D-glucopyranside]20-*O*-[β-D-glucopyranosyl-(1 → 6)-β-D-glucopyranoside]
[化学名・別名]Koryoginsenoside Rg_2
[CAS No.]171746-13-7
[化合物分類]テルペノイド(Dammarane triterpenoid)
[構造式]



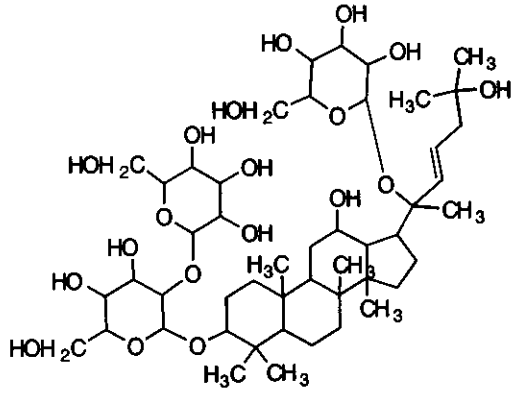
[分子式]$C_{54}H_{92}O_{24}$
[分子量]1125.306
[正確な分子量]1124.59786
[基原]*Panax ginseng*
[性状]無定型の粉末
[比旋光度]:$[\alpha]_D^{22}$ +12 (c, 0.04 in MeOH)

----------文献----------

Kim, D.-S. et al., Phytochemistry, 1995, 40, 1493, (Koryoginsenoside R_2, 分離)

§ Dammar-23-ene-3,12,20,25-tetrol; (3 β,12 β,20*S*,23 ξ)-form, 3-*O*-[β-D-Glucopyranosyl-(1 → 2)-β-D-glucopyranoside]20-*O*-β-D-glucopyranoside
[化学名・別名]Ginsenoside M_{6a}
[CAS No.]93376-72-8

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



[分子式]$C_{48}H_{82}O_{19}$
[分子量]963.164
[正確な分子量]962.545035
[基原]次の植物から分離:*Panax ginseng*

----------文献----------

Ikekawa, N. et al., Phytochemistry, 1972, 11, 3037
Feng, B. et al., CA, 1988, 108, 183641a, (Majoroside F_4)
Rickling, B. et al., Planta Med., 1993, 59, 76, (分離, H-NMR, C13-NMR, malonate)
Minh Duc, N. et al., Chem. Pharm. Bull., 1994, 42, 115, (Vinaginsenoside R8)
Yoshikawa, M. et al., Chem. Pharm. Bull., 1997, 45, 1039; 1056, (Notoginsenoside)
Minh Duc, N. et al., Stud. Plant Sci., 1999, 6, 77, (Vinaginsenoside R19)

§ Dammar-24-ene-3,6,12,20-tetrol; (3 β,6 α,12 β,20*R*)-form, Glycoside (1)
[化学名・別名]Panaxoside B
[化合物分類]テルペノイド(Dammarane triterpenoid)テルペノイド(Terpenoids 構造は未知),
[構造式]有効な構造式はない
[基原]次の植物から得られる配糖体: *Panax ginseng*
[その他のデータ]構造は未知. データは入手しにくい

----------文献----------

Uvarova, N.I. et al., Khim. Prir. Soedin., 1965, 1, 82; Chem. Nat. Compd. (Engl. Transl.), 1965, 1, 63, (Panaxoside)
Nagai, Y. et al., Tetrahedron, 1971, 27, 881, (分離, 構造決定)
Sanada, S. et al., Chem. Pharm. Bull., 1974, 22, 2407; 1978, 26, 1694, (分離, Ginsenoside R_e)
Lin, T.D. et al., Chem. Pharm. Bull., 1976, 24, 253, (分離)
Yahara, S. et al., Chem. Pharm. Bull., 1976, 24, 2204; 1979, 27, 88, (Ginsenoside)
Lin, T.-D. et al., J. Chin. Chem. Soc. (Taipei), 1979, 26, 29, (Chikusetsusaponin IV_c)
Zhou, J. et al., Chem. Pharm. Bull., 1981, 29, 2844, (分離)
Matsuura, H. et al., Chem. Pharm. Bull., 1983, 31, 2281, (Notoginsenosides R3 and R6)
Tanaka, O. et al., Chem. Pharm. Bull., 1985, 33, 2323, (Pseudoginsenoside RT_3)
Minh Duc, N. et al., Chem. Pharm. Bull., 1994, 42, 115, (Vinaginsenoside R4)
Kim, D.-S. et al., Phytochemistry, 1995, 40, 1493, (Koryoginsenoside R, Ginsenoside Rg_1)
Dou, D.Q. et al., J. Chin. Pharm. Sci., 1996, 5, 48; CA, 126, 328059a, (Ginsenoside F5)
Dou, D. et al., Planta Med., 1996, 62, 179, (Ginsenoside I_e)
Yoon, S.-R. et al., Chem. Pharm. Bull., 1998, 48, 1144, (Ginsenosides R_f and R_{g2}, assay)

§ Dammar-24-ene-3,6,12,20-tetrol; (3 β,6 α,12 β,20*R*)-form, Glycoside (2)
[化学名・別名]Panaxoside C
[化合物分類]テルペノイド(Dammarane triterpenoid)テルペノイド(Terpenoids 構造は未知),
[構造式]有効な構造式はない
[分子式]$C_{48}H_{82}O_{17}$
[分子量]931.166
[正確な分子量]930.555205
[基原]次の植物から得られる配糖体: *Panax ginseng*
[性状]結晶(1-butanol/butanone)
[融点]Mp 185-187 ℃
[比旋光度]:$[\alpha]_D$ -4.3 (c, 2.76 in MeOH)

[その他のデータ]構造は未知.

----------文献----------

Uvarova, N.I. et al., Khim. Prir. Soedin., 1965, 1, 82; Chem. Nat. Compd. (Engl. Transl.), 1965, 1, 63, (Panaxoside)
Nagai, Y. et al., Tetrahedron, 1971, 27, 881, (分離, 構造決定)
Sanada, S. et al., Chem. Pharm. Bull., 1974, 22, 2407; 1978, 26, 1694, (分離, Ginsenoside R_c)
Lin, T.D. et al., Chem. Pharm. Bull., 1976, 24, 253, (分離)
Yahara, S. et al., Chem. Pharm. Bull., 1976, 24, 2204; 1979, 27, 88, (Ginsenoside)
Lin, T.-D. et al., J. Chin. Chem. Soc. (Taipei), 1979, 26, 29, (Chikusetsusaponin IV_c)
Zhou, J. et al., Chem. Pharm. Bull., 1981, 29, 2844, (分離)
Matsuura, H. et al., Chem. Pharm. Bull., 1983, 31, 2281, (Notoginsenosides R3 and R6)
Tanaka, O. et al., Chem. Pharm. Bull., 1985, 33, 2323, (Pseudoginsenoside RT_3)
Minh Duc, N. et al., Chem. Pharm. Bull., 1994, 42, 115, (Vinaginsenoside R4)
Kim, D.-S. et al., Phytochemistry, 1995, 40, 1493, (Koryoginsenoside R, Ginsenoside Rg_1)
Dou, D.Q. et al., J. Chin. Pharm. Sci., 1996, 5, 48; CA, 126, 328059a, (Ginsenoside F5)
Dou, D. et al., Planta Med., 1996, 62, 179, (Ginsenoside I_e)
Yoon, S.-R. et al., Chem. Pharm. Bull., 1998, 48, 1144, (Ginsenosides R_f and R_{g2}, assay)

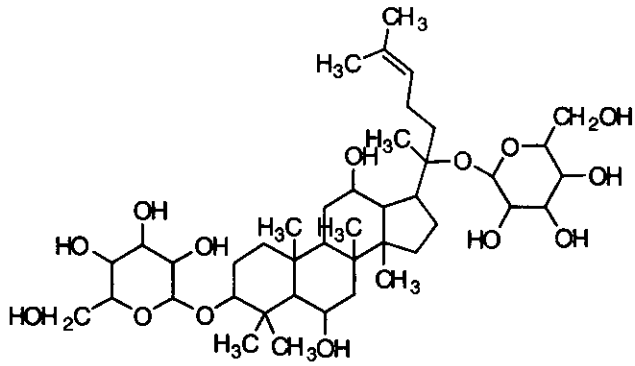
§ Dammar-24-ene-3,6,12,20-tetrol; (3 β,6 α,12 β,20*S*)-form, 3,20-Di-*O*-β-D-glucopyranoside

[化学名・別名]Ginsenoside I.

[CAS No.]177745-52-7

[化合物分類]テルペノイド(Dammarane triterpenoid)

[構造式]



[分子式]$C_{42}H_{72}O_{14}$

[分子量]801.022

[正確な分子量]800.49221

[基原]*Panax ginseng*

[性状]粉末

[融点]Mp 190-191 ℃

----------文献----------

Yahara, S. et al., Chem. Pharm. Bull., 1976, 24, 2204; 1979, 27, 88, (Ginsenoside)
Dou, D. et al., Planta Med., 1996, 62, 179, (Ginsenoside I_e)

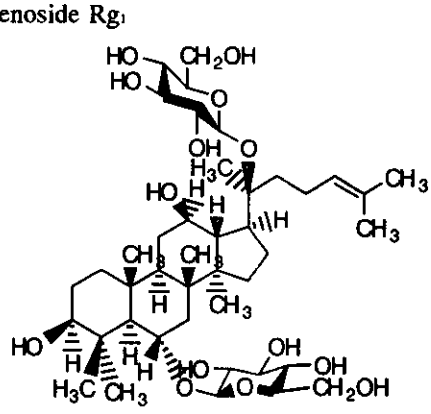
§ Dammar-24-ene-3,6,12,20-tetrol; (3 β,6 α,12 β,20*S*)-form, 6,20-Di-*O*-β-D-glucopyranoside

[化学名・別名]Ginsenoside A_2. Panaxoside A. Sanchinoside C_1. Ginsenoside Rg_1

[CAS No.]22427-39-0

[化合物分類]テルペノイド(Dammarane triterpenoid)

[構造式]



[分子式]$C_{42}H_{72}O_{14}$

[分子量]801.022

[正確な分子量]800.49221

[基原]*Panax ginseng*

[性状]粉末

[融点]Mp 194-196.5 ℃

[比旋光度]:$[\alpha]_D^{19.5}$ +32 (Py)

[傷害・毒性]50 %致死量(LD_{50})(マウス, 腹腔内投与) 405 mg/kg

[化学物質毒性データ総覧(RTECS)登録番号]LY9537200

----------文献----------

Sanada, S. et al., Chem. Pharm. Bull., 1974, 22, 2407; 1978, 26, 1694, (分離, Ginsenoside R_c)
Lin, T.D. et al., Chem. Pharm. Bull., 1976, 24, 253, (分離)
Yahara, S. et al., Chem. Pharm. Bull., 1976, 24, 2204; 1979, 27, 88, (Ginsenoside)
Kim, D.-S. et al., Phytochemistry, 1995, 40, 1493, (Koryoginsenoside R, Ginsenoside Rg_1)
Yoon, S.-R. et al., Chem. Pharm. Bull., 1998, 48, 1144, (Ginsenosides R_f and R_{g2}, assay)

RTECS（化学物質毒性データ）

生体影響物質　　：医薬品. 天然物.

健康障害に関するデータ

急性毒性に関するデータ

〈〈試験方法〉〉 LD50 試験(50%致死量試験).

曝露経路　　：腹腔内投与

被験動物　　：げっ歯類-マウス

投与量・期間：405 mg/kg

毒性影響　　：致死量以外に毒性影響に関する報告はない.

参照文献

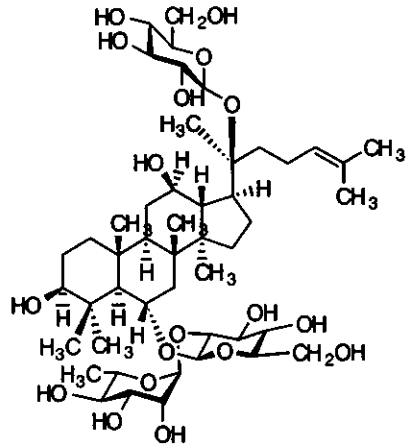
ARZNAD Arzneimittel-Forschung. 医薬品. Research. (Editio Cantor Verlag, Postfach 1255, W-7960 Aulendorf, Fed. Rep. Ger.) V.1- 1951- [Vol.,頁,年(19-)]25,343,1975

§ Dammar-24-ene-3,6,12,20-tetrol; (3 β,6 α,12 β,20*S*)-form, 6-*O*-[α-L-Rhamnopyranosyl-(1 → 2)-β-D-glucopyranoside] 20-*O* - β-D-glucopyranoside

[化学名・別名]Ginsenoside B_2. Chikusetsusaponin IVc. Ginsenoside R_e

[CAS No.]52286-59-6

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



[分子式]$C_{48}H_{82}O_{18}$

[分子量]947.165

[正確な分子量]946.55012

[基原]*Panax ginseng, Panax japonicum*

[性状]針状結晶(EtOH 溶液)

[融点]Mp 201-203 ℃

[比旋光度]:$[\alpha]_D^{30}$ 0 (c, 1 in MeOH)

[化学物質毒性データ総覧(RTECS)登録番号]LY9536700

----------文献----------

Sanada, S. et al., Chem. Pharm. Bull., 1974, 22, 2407; 1978, 26, 1694, (分離, Ginsenoside R_e)

Lin, T.D. et al., Chem. Pharm. Bull., 1976, 24, 253, (分離)

Yahara, S. et al., Chem. Pharm. Bull., 1976, 24, 2204; 1979, 27, 88, (Ginsenoside)

Dou, D. et al., Planta Med., 1996, 62, 179, (Ginsenoside L)

Yoon, S.-R. et al., Chem. Pharm. Bull., 1998, 48, 1144, (Ginsenosides R_f and R_{g2}, assay)

RTECS（化学物質毒性データ）

生体影響物質　　：医薬品. 天然物.

健康障害に関するデータ

急性毒性に関するデータ

〈〈試験方法〉〉 LD50 試験(50%致死量試験).

曝露経路　　：腹腔内投与

被験動物　　：げっ歯類-マウス

投与量・期間：405 mg/kg

毒性影響　　：致死量以外に毒性影響に関する報告はない.

参照文献

ARZNAD Arzneimittel-Forschung. 医薬品. Research. (Editio Cantor Verlag, Postfach 1255, W-7960 Aulendorf, Fed. Rep. Ger.) V.1- 1951- [Vol.,頁,年(19-)]25,539,1975

〈〈試験方法〉〉 LD50 試験(50%致死量試験).

曝露経路　　：皮下投与.

被験動物　　：げっ歯類-マウス

投与量・期間：>1500 mg/kg

毒性影響　　：致死量以外に毒性影響に関する報告はない.

参照文献

SYHJAM Saengyak Hakhoechi. Journal of the Society of Pharmacognosy. (Hanguk Saengyak Hakhoe, c/o Natural Products Institute, Seoul National Univ., 28 Yunkeon-Dong, Chong-ro-ku, Seoul 110, Korea)

1970- [Vol.,頁,年(19-)]10,61,1979

〈〈試験方法〉〉 LD50 試験(50%致死量試験).

曝露経路　　：静脈注射

被験動物　　：げっ歯類-マウス

投与量・期間：130 mg/kg

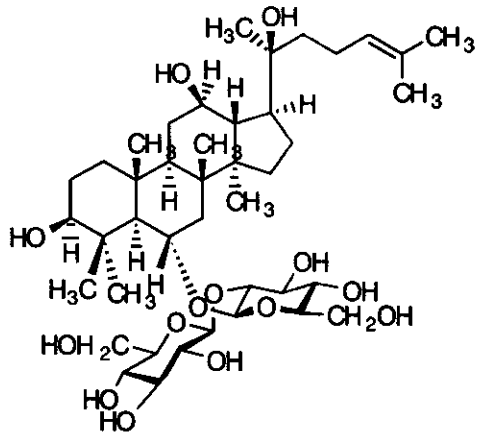
毒性影響　　：致死量以外に毒性影響に関する報告はない.

参照文献

SYHJAM Saengyak Hakhoechi. Journal of the Society of Pharmacognosy. (Hanguk Saengyak Hakhoe, c/o Natural Products Institute, Seoul National Univ., 28 Yunkeon-Dong, Chong-ro-ku, Seoul 110, Korea) 1970- [Vol.,頁,年(19-)]10,61,1979

§ Dammar-24-ene-3,6,12,20-tetrol; (3 β,6 α,12 β,20*S*)-form, 6-*O*-[β-D-Glucopyranosyl-(1 → 2)-β-D-glucopyranoside]

[化学名・別名]Ginsenoside R_f



[CAS No.]52286-58-5

[化合物分類]テルペノイド(Dammarane triterpenoid)

[構造式]

[分子式]$C_{42}H_{72}O_{14}$

[分子量]801.022

[正確な分子量]800.49221

[基原]*Panax ginseng*

[用途]免疫刺激剤 と他の薬理作用.

[性状]粉末 (Me_2CO)

[融点]Mp 197-198 ℃

[比旋光度]:$[\alpha]_D^{30}$ +7 (c, 1 in MeOH)

[化学物質毒性データ総覧(RTECS)登録番号]LY9536900

----------文献----------

Sanada, S. et al., Chem. Pharm. Bull., 1974, 22, 2407; 1978, 26, 1694, (分離, Ginsenoside R_f)

Lin, T.D. et al., Chem. Pharm. Bull., 1976, 24, 253, (分離)

Yahara, S. et al., Chem. Pharm. Bull., 1976, 24, 2204; 1979, 27, 88, (Ginsenoside)

Yoon, S.-R. et al., Chem. Pharm. Bull., 1998, 48, 1144, (Ginsenosides R_f and R_{g2}, assay)

***RTECS (化学物質毒性データ) ***

生体影響物質　　：医薬品. 天然物.

健康障害に関するデータ

急性毒性に関するデータ

〈〈試験方法〉〉 LD50 試験(50%致死量試験).

曝露経路　　：腹腔内投与

被験動物　　：げっ歯類-マウス

投与量・期間：1340 mg/kg

毒性影響　　：致死量以外に毒性影響に関する報告はない.

参照文献

ARZNAD Arzneimittel-Forschung. 医薬品. Research. (Editio Cantor Verlag, Postfach 1255, W-7960 Aulendorf, Fed. Rep. Ger.) V.1- 1951- [Vol.,頁,年(19-)]25,539,1975

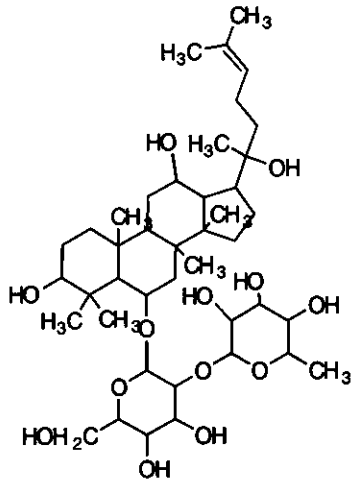
§ Dammar-24-ene-3,6,12,20-tetrol; (3 β,6 α,12 β,20*S*)-form, 6-*O*-[α-L-Rhamnopyranosyl-(1 → 2)-β-D-glucopyranoside]

[化学名・別名]Ginsenoside C. Chikusetsusaponin I. Ginsenoside R_{g2}

[CAS No.]52286-74-5

[化合物分類]テルペノイド(Dammarane triterpenoid)

[構造式]



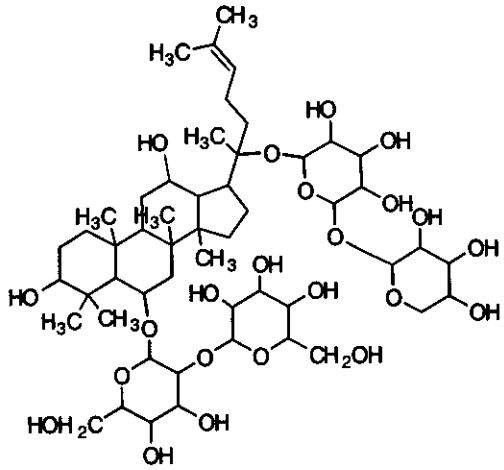
[分子式] $C_{42}H_{72}O_{13}$
[分子量] 785.023
[正確な分子量] 784.497295
[基原] *Panax ginseng*
[性状] 結晶(EtOH)
[融点] Mp 187-189 ℃
[比旋光度]: $[\alpha]_D^{30}$ +5.5 (c, 1 in MeOH)

----------文献----------

Nagai, Y. et al., Tetrahedron, 1971, 27, 881, (分離, 構造決定)
Sanada, S. et al., Chem. Pharm. Bull., 1974, 22, 2407; 1978, 26, 1694, (分離, Ginsenoside R_e)
Lin, T.D. et al., Chem. Pharm. Bull., 1976, 24, 253, (分離)
Yahara, S. et al., Chem. Pharm. Bull., 1976, 24, 2204; 1979, 27, 88, (Ginsenoside)
Lin, T.-D. et al., J. Chin. Chem. Soc. (Taipei), 1979, 26, 29, (Chikusetsusaponin IV_c)
Zhou, J. et al., Chem. Pharm. Bull., 1981, 29, 2844, (分離)
Yoon, S.-R. et al., Chem. Pharm. Bull., 1998, 48, 1144, (Ginsenosides R_f and R_{g2}, assay)

§ Dammar-24-ene-3,6,12,20-tetrol; (3 β,6 α,12 β,20*S*)-form, 3-*O*-[β-D-Glucopyranosyl-(1 → 2)-β-D-glucopyranoside] 20-*O*-[β-D-xylopyranosyl-(1 → 6)-β-D-glucopyranoside]

[化学名・別名] Ginsenoside R_{b3}
[CAS No.] 68406-26-8
[化合物分類] テルペノイド(Dammarane triterpenoid)
[構造式]



[分子式] $C_{53}H_{90}O_{23}$
[分子量] 1095.28
[正確な分子量] 1094.587295
[基原] *Panax ginseng*
[性状] 粉末 (2-propanol)
[融点] Mp 193-195 ℃
[比旋光度]: $[\alpha]_D^{28}$ +19.4 (c, 1 in MeOH)
[化学物質毒性データ総覧(RTECS)登録番号] LZ5857000

----------文献----------

Sanada, S. et al., Chem. Pharm. Bull., 1974, 22, 2407; 1978, 26, 1694, (分離, Ginsenoside R_e)
Yahara, S. et al., Chem. Pharm. Bull., 1976, 24, 2204; 1979, 27, 88, (Ginsenoside)
Yoon, S.-R. et al., Chem. Pharm. Bull., 1998, 48, 1144, (Ginsenosides R_f and R_{g2}, assay)

***RTECS (化学物質毒性データ) ***

生体影響物質　　: 医薬品. 天然物.

健康障害に関するデータ

急性毒性に関するデータ

〈〈試験方法〉〉 LD50 試験(50%致死量試験).
曝露経路　　: 腹腔内投与
被験動物　　: げっ歯類-マウス
投与量・期間 : 637 mg/kg
毒性影響　　: 致死量以外に毒性影響に関する報告はない.

参照文献

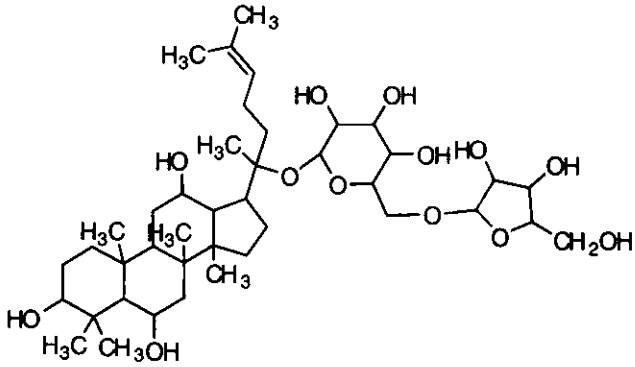
FRXXBL French Demande Patent Document. (U.S. Patent and Trademark Office, Foreign Patents, Washington, DC 20231) [Vol.,頁,年(19-)]2430234

§ Dammar-24-ene-3,6,12,20-tetrol; (3 β,6 α,12 β,20*S*)-form, 20-*O*-[α-L-Arabinofuranosyl-(1 → 6)-β-D-glucopyranoside]

[化学名・別名]Ginsenoside F_5

[化合物分類]テルペノイド(Dammarane triterpenoid)

[構造式]



[分子式]$C_{41}H_{70}O_{13}$

[分子量]770.996

[正確な分子量]770.481645

[基原]*Panax ginseng*

[性状]粉末

[融点]Mp 189-190 ℃

----------文献----------

Yahara, S. et al., Chem. Pharm. Bull., 1976, 24, 2204; 1979, 27, 88, (Ginsenoside)

Dou, D.Q. et al., J. Chin. Pharm. Sci., 1996, 5, 48; CA, 126, 328059a, (Ginsenoside F5)

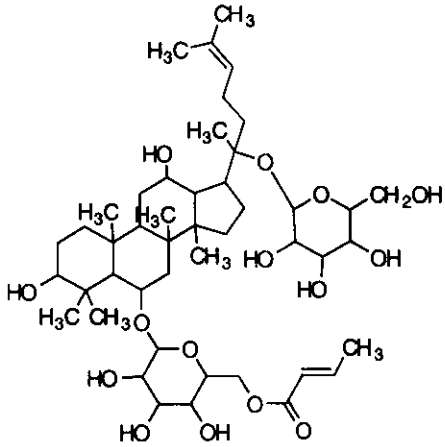
§ Dammar-24-ene-3,6,12,20-tetrol; (3 β,6 α,12 β,20*S*)-form, 6-*O*-[6-(2-Butenoyl)-β-D-glucopyranoside]20-*O*-β-D-glucopyranoside

[化学名・別名]Koryoginsenoside R_1

[CAS No.]171674-97-8

[化合物分類]テルペノイド(Dammarane triterpenoid)

[構造式]



[分子式]$C_{46}H_{76}O_{15}$

[分子量]869.097

[正確な分子量]868.518425

[基原]*Panax ginseng*

[性状]無定型の粉末

[比旋光度]:$[\alpha]_D^{24}$ +39.5 (c, 0.05 in MeOH)

----------文献----------

Kim, D.-S. et al., Phytochemistry, 1995, 40, 1493, (Koryoginsenoside R, Ginsenoside Rg_1)

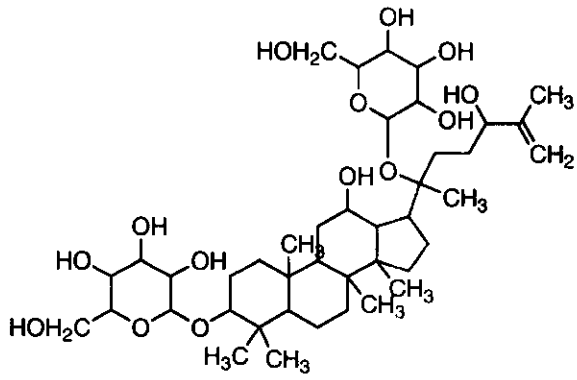
§ Dammar-25-ene-3,12,20,24-tetrol; (3 β,12 β,20*S*,24*R*)-form, 3,20-Di-*O*-β-D-glucopyranoside

[化学名・別名]Ginsenoside Ib

[CAS No.]215720-23-3

[化合物分類]テルペノイド(Dammarane triterpenoid)

[構造式]



[分子式]$C_{42}H_{72}O_{14}$

[分子量]801.022

[正確な分子量]800.49221

[基原]*Panax ginseng*

[性状]結晶

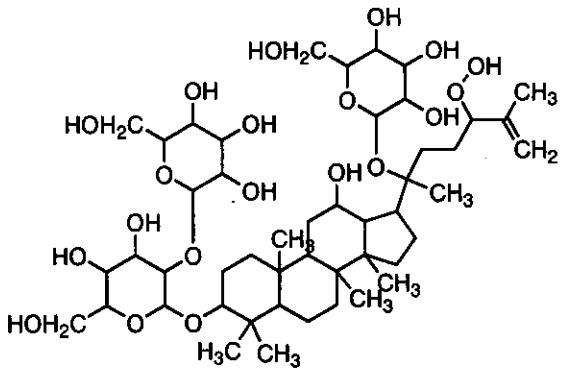
[融点]Mp 187-188 ℃

----------文献----------

Dou, D. et al., Zhongguo Yaowu Huaxue Zazhi, 1997, 7, 202; CA, 130, 335321r, (Ginsenoside Ib)

§ Dammar-25-ene-3,12,20,24-tetrol; (3 β,12 β,20*S*,24*R*)-form, 24-Hydroperoxide, 3-*O*-[β-D-glucopyranosyl-(1 → 2)-β-D-glucopyranoside] 20-*O*-β-D-glucopyranoside

[化学名・別名] Ginsenoside I
[CAS No.] 227758-58-9
[化合物分類] テルペノイド (Dammarane triterpenoid)
[構造式]



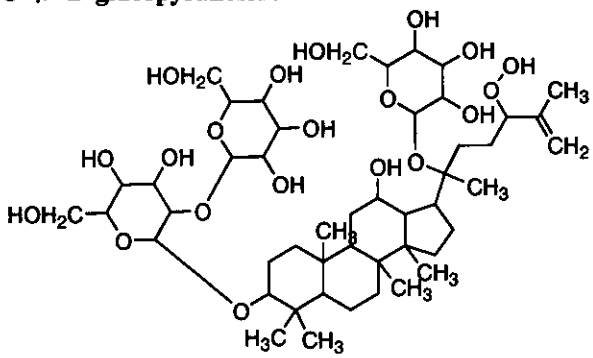
[分子式] $C_{48}H_{82}O_{20}$
[分子量] 979.164
[正確な分子量] 978.53995
[基原] *Panax ginseng*

----------文献----------

Qiu, F. et al., Zhongguo Yaowu Huaxue Zazhi, 1998, 8, 285; CA, 131, 56416f, (Ginsenosides I and II)

§ Dammar-25-ene-3,12,20,24-tetrol; (3 β,12 β,20*S*,24*S*)-form, 24-Hydroperoxide, 3-*O*-[β-D-glucopyranosyl-(1 → 2)-β-D-glucopyranoside] 20-*O*-β-D-glucopyranoside

[化学名・別名] Ginsenoside II
[CAS No.] 227758-59-0
[化合物分類] テルペノイド (Dammarane triterpenoid)
[構造式]



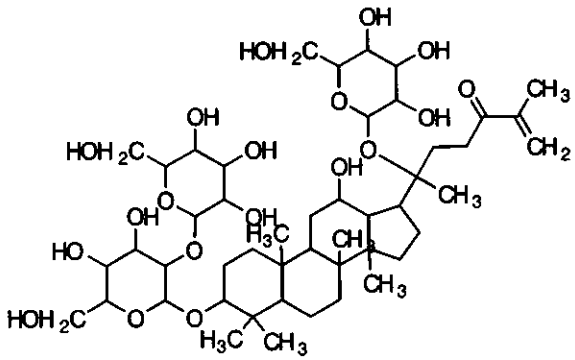
[分子式] $C_{48}H_{82}O_{20}$
[分子量] 979.164
[正確な分子量] 978.53995
[基原] *Panax ginseng*

----------文献----------

Qiu, F. et al., Zhongguo Yaowu Huaxue Zazhi, 1998, 8, 285; CA, 131, 56416f, (Ginsenosides I and II)

§ Dammar-25-ene-3,12,20,24-tetrol; (3 β,12 β,20*S*,24 ξ)-form, 24-Ketone, 3-*O*-[β-D-glucopyranosyl-(1 → 2)-β-D-glucopyranoside] 20-β-D-glucopyranoside

[化学名・別名] Ginsenoside III. Vinaginsenoside R20
[CAS No.] 223710-06-3
[化合物分類] テルペノイド (Dammarane triterpenoid)
[構造式]



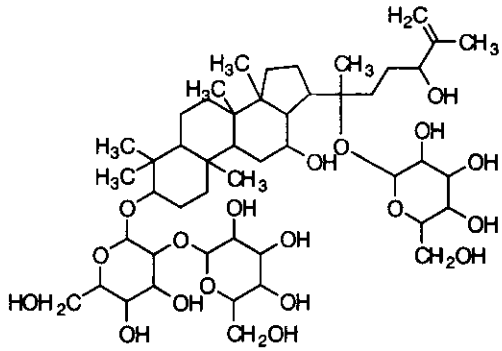
[分子式] $C_{48}H_{80}O_{19}$
[分子量] 961.149
[正確な分子量] 960.529385
[基原] *Panax ginseng*, *Panax vietnamensis*
[性状] 結晶
[融点] Mp 203-205 ℃

----------文献----------

Qiu, F. et al., Chin. Chem. Lett., 1998, 9, 643, (Ginsenoside III)
Minh Duc, N. et al., Stud. Plant Sci., 1999, 6, 77, (Vinaginsenoside R20)

§ Dammar-25-ene-3,12,20,24-tetrol; (3 β,12 β,20 ξ,24 ξ)-form, 3-*O*-[β-D-Glucopyranosyl-(1 → 2)-β-D-glucopyranoside] 20-*O*-β-D-glucopyranoside

[化学名・別名] Ginsenoside $M_{6\text{-}bc}$
[CAS No.] 93376-73-9
[化合物分類] テルペノイド (Dammarane triterpenoid)
[構造式]

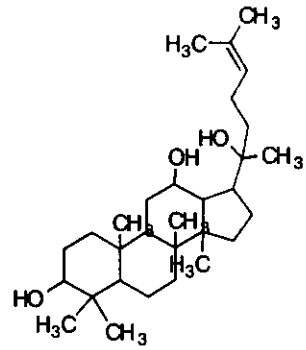


[分子式] $C_{48}H_{82}O_{19}$
[分子量] 963.164
[正確な分子量] 962.545035
[基原] 次の植物から分離:*Panax ginseng*

----------文献----------

Ikekawa, M. et al., Phytochemistry, 1972, 11, 3037
Feng, B. et al., CA, 1988, 108, 183641a, (Majoroside)
Wang, D.Q. et al., Yaoxue Xuebao, 1989, 24, 593, (Bipinnatifidusoside F_1)
Minh Duc, N. et al., Chem. Pharm. Bull., 1994, 42, 115, (Vinaginsenoside R9)
Yoshikawa, M. et al., Chem. Pharm. Bull., 1997, 45, 1039, (Notoginsenoside)
Hilpisch, U. et al., Planta Med., 1997, 63, 347, (malonyl ester)
Dou, D. et al., Zhongguo Yaowu Huaxue Zazhi, 1997, 7, 202; CA, 130, 335321r, (Ginsenoside Ib)
Qiu, F. et al., Chin. Chem. Lett., 1998, 9, 643, (Ginsenoside III)
Qiu, F. et al., Zhongguo Yaowu Huaxue Zazhi, 1998, 8, 285; CA, 131, 56416f, (Ginsenosides I and II)
Minh Duc, N. et al., Stud. Plant Sci., 1999, 6, 77, (Vinaginsenoside R20)

§ Dammar-24-ene-3,12,20-triol; (3 α,12 β,20*S*)-form



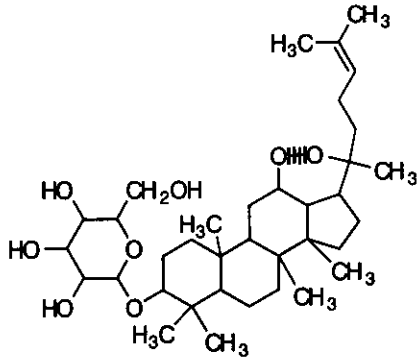
[化学名・別名] Betulafolienetriol
[CAS No.] 6892-79-1
[化合物分類] テルペノイド (Dammarane triterpenoid)
[構造式]

[基原] Genuine sapogenin of glycosides from *Panax ginseng*
[性状] 結晶
[融点] Mp 236-238 ℃ (197-198 ℃)
[比旋光度]: $[\alpha]_D$ +20.5 (c, 1 in $CHCl_3$)

----------文献----------

Uvarova, N.I. et al., Khim. Prir. Soedin., 1965, 1, 82; Chem. Nat. Compd. (Engl. Transl.), 1965, 1, 63, (Panaxoside)
Elyakov, C.-B. et al., Khim. Prir. Soedin., 1967, 3, 164; Chem. Nat. Compd. (Engl. Transl.), 1967, 3, 135, (Panaxoside)
Nagai, M. et al., Tet. Lett., 1967, 3579, (分離)
Sanada, S. et al., Chem. Pharm. Bull., 1974, 22, 421; 2407, (分離, 構造決定)
Lin, T.D. et al., Chem. Pharm. Bull., 1976, 24, 253, (分離)
Besso, H. et al., Chem. Pharm. Bull., 1982, 30, 2380; 4534, (分離)
Koizumi, H. et al., Chem. Pharm. Bull., 1982, 30, 2393, (分離)
Takemoto, T. et al., Yakugaku Zasshi, 1983, 103, 173; 1015; 1984, 104, 1043; 1986, 106, 664; 1987, 107, 355, (Gypenoside)
Atopkina, L.N. et al., Khim. Prir. Soedin., 1989, 25, 813; Chem. Nat. Compd. (Engl. Transl.), 1989, 25, 690, (合成法, Ginsenoside Rh_2)
Martindale, The Extra Pharmacopoeia, 30th edn., Pharmaceutical Press, 1993, 1372
Ma, W.G. et al., Phytochemistry, 1999, 52, 1133, (Panax notoginseng saponin)
Lewis, R.J., Sax's Dangerous Properties of Industrial Materials, 8th edn., Van Nostrand Reinhold, 1992, PAF450

§ Dammar-24-ene-3,12,20-triol; (3 β,12 β,20*R*)-form, 3-*O*-β-D-Glucopyranoside
[化学名・別名](20*R*)-Ginsenoside Rh_2
[CAS No.]112246-15-8
[化合物分類]薬物: 抗腫瘍薬(Antineoplastic agent), テルペノイド (Dammarane triterpenoid)
[構造式]

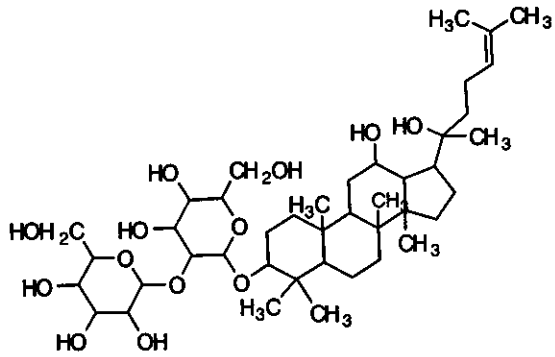


[分子式]$C_{36}H_{62}O_8$
[分子量]622.881
[正確な分子量]622.44447
[基原]次の植物から分離:*Panax ginseng*
[用途]抗腫瘍性剤
[性状]結晶
[融点]Mp 278-280 ℃

----------文献----------

Atopkina, L.N. et al., Khim. Prir. Soedin., 1989, 25, 813; Chem. Nat. Compd. (Engl. Transl.), 1989, 25, 690, (合成法, Ginsenoside Rh_2)

§ Dammar-24-ene-3,12,20-triol; (3 β,12 β,20*R*)-form, 3-*O*-[β-D-Glucopyranosyl-(1 → 2)-β-D-glucopyranoside]
[化学名・別名](20*R*)-Ginsenoside Rg_3
[CAS No.]38243-03-7
[化合物分類]テルペノイド(Dammarane triterpenoid)
[構造式]

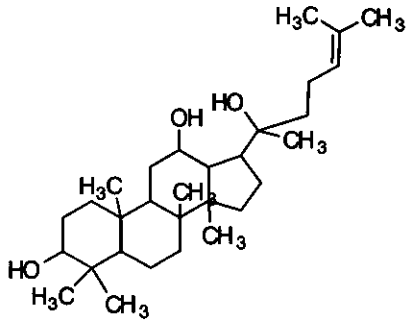


[分子式]$C_{42}H_{72}O_{13}$
[分子量]785.023
[正確な分子量]784.497295
[基原]次の植物から分離:*Panax ginseng*
[性状]結晶(MeOH 溶液)
[融点]Mp 192-194 ℃
[比旋光度]:$[\alpha]_D^{20}$ +8.5 (c, 1.0 in MeOH)

----------文献----------

Anufriev, V.P. et al., Carbohydr. Res., 1997, 304, 179, (Ginsenoside Rg_3)

§ Dammar-24-ene-3,12,20-triol; (3 β,12 β,20*S*)-form
[化学名・別名]Protopanaxadiol
[その他の CAS No.]30636-90-9
[化合物分類]テルペノイド(Dammarane triterpenoid)
[構造式]



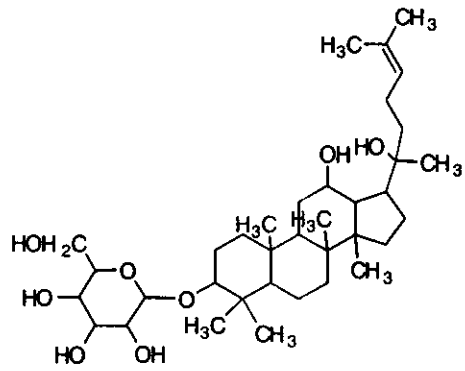
[基原]Sapogenin of Ginsenosides Rb_1, Rb_2 and R_c from *Panax ginseng*
[性状]結晶
[融点]Mp 199-200 ℃
[溶解性]メタノール, ブタノールに可溶

----------文献----------

Uvarova, N.I. et al., Khim. Prir. Soedin., 1965, 1, 82; Chem. Nat. Compd. (Engl. Transl.), 1965, 1, 63, (Panaxoside)
Besso, H. et al., Chem. Pharm. Bull., 1982, 30, 2380; 4534, (分離)
Koizumi, H. et al., Chem. Pharm. Bull., 1982, 30, 2393, (分離)
Takemoto, T. et al., Yakugaku Zasshi, 1983, 103, 173; 1015; 1984, 104, 1043; 1986, 106, 664; 1987, 107, 355, (Gypenoside)
Martindale, The Extra Pharmacopoeia, 30th edn., Pharmaceutical Press, 1993, 1372
Ma, W.G. et al., Phytochemistry, 1999, 52, 1133, (Panax notoginseng saponin)

§ Dammar-24-ene-3,12,20-triol; (3 β,12 β,20*S*)-form, 3-*O*-β-D-Glucopyranoside
[化学名・別名]Ginsenoside Rh_2

[CAS No.] 78214-33-2
[化合物分類] テルペノイド (Dammarane triterpenoid)
[構造式]

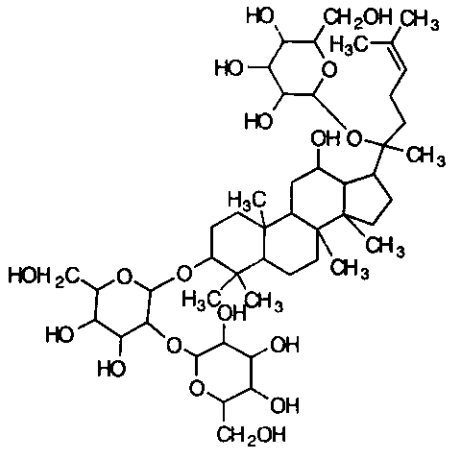


[分子式] $C_{36}H_{62}O_8$
[分子量] 622.881
[正確な分子量] 622.44447
[基原] 次の植物から分離:*Panax ginseng*

----------文献----------

Atopkina, L.N. et al., Khim. Prir. Soedin., 1989, 25, 813; Chem. Nat. Compd. (Engl. Transl.), 1989, 25, 690, (合成法, Ginsenoside Rh_2)

§ Dammar-24-ene-3,12,20-triol; (3 β,12 β,20*S*)-form, 3-*O*-[β-D-Glucopyranosyl-(1 → 2)-β-D-glucopyranoside] 20-*O*-β-D-glucopyranoside
[化学名・別名] Ginsenoside R_d. Gypenoside VIII
[CAS No.] 52705-93-8
[化合物分類] テルペノイド (Dammarane triterpenoid)
[構造式]



[分子式] $C_{48}H_{82}O_{18}$
[分子量] 947.165
[正確な分子量] 946.55012
[基原] *Panax ginseng*
[性状] 粉末
[融点] Mp 206-209 ℃
[比旋光度]: $[\alpha]_D^{22}$ +19.4 (c, 1 in MeOH)
[化学物質毒性データ総覧 (RTECS) 登録番号] LZ5858000

----------文献----------

Elyakov, C.-B. et al., Khim. Prir. Soedin., 1967, 3, 164; Chem. Nat. Compd. (Engl. Transl.), 1967, 3, 135, (Panaxoside)
Nagai, M. et al., Tet. Lett., 1967, 3579, (分離)
Kasai, R. et al., Chem. Pharm. Bull., 1976, 24, 400; 1983, 31, 2120, (合成法, Ginsenoside Rs_1, Ginsenoside Rs_2)
Matsuura, H. et al., Chem. Pharm. Bull., 1983, 31, 2281, (Notoginsenoside R_4)
Yang, T.R. et al., Phytochemistry, 1983, 22, 1473, (Notoginsenoside)
Matsuura, H. et al., Chem. Pharm. Bull., 1984, 32, 1188, (Ginsenoside Ra_3)
Namba, T. et al., Chem. Pharm. Bull., 1986, 34, 730, (Pseudoginsenoside R_{c1})
Xu, S. et al., Yaoxue Xuebao, 1987, 22, 750; CA, 108, 72123, (Ginsenoside RA_0)
Yoshikawa, K. et al., Chem. Pharm. Bull., 1989, 37, 852, (Gypenoside)
Atopkina, L.N. et al., Khim. Prir. Soedin., 1989, 25, 813; Chem. Nat. Compd. (Engl. Transl.), 1989, 25, 690, (合成法, Ginsenoside Rh_2)
Yang, Y.W. et al., Huaxue Xuebao, 1994, 52, 234; CA, 120, 299100a, (Ginsenoside Rb_1, H-NMR, C13-NMR)
Anufriev, V.P. et al., Carbohydr. Res., 1997, 304, 179, (Ginsenoside Rg_3)
Ma, W.G. et al., Phytochemistry, 1999, 52, 1133, (Panax notoginseng saponin)

***RTECS (化学物質毒性データ) ***

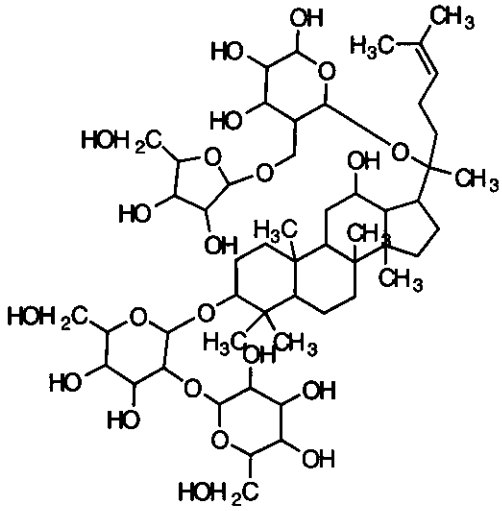
生体影響物質　　: 医薬品. 天然物.

健康障害に関するデータ
急性毒性に関するデータ

〈〈試験方法〉〉 LD50 試験(50%致死量試験).
曝露経路　　：腹腔内投与
被験動物　　：げっ歯類-マウス
投与量・期間：324 mg/kg
毒性影響　　：致死量以外に毒性影響に関する報告はない.
参照文献
ARZNAD Arzneimittel-Forschung. 医薬品. Research. (Editio Cantor Verlag, Postfach 1255, W-7960 Aulendorf, Fed. Rep. Ger.) V.1- 1951- [Vol.,頁,年(19-)]25,343,1975

§ Dammar-24-ene-3,12,20-triol; (3 β,12 β,20S)-form, 3-*O*-[β-D-Glucopyranosyl-(1 → 2)-β-D-glucopyranoside]20-*O*-[α-L-arabinofuranosyl-(1 → 6)-β-D-glucopyranoside]

[化学名・別名]Ginsenoside R_e
[CAS No.]11021-14-0
[化合物分類]テルペノイド(Dammarane triterpenoid)
[構造式]



[分子式]$C_{53}H_{90}O_{22}$
[分子量]1079.281
[正確な分子量]1078.59238
[基原]*Panax ginseng*
[性状]粉末
[融点]Mp 199-201 ℃
[比旋光度]:$[\alpha]_D^{22}$ +1.9 (c, 1 in MeOH)
[化学物質毒性データ総覧(RTECS)登録番号]LY9536300

----------文献----------

Uvarova, N.I. et al., Khim. Prir. Soedin., 1965, 1, 82; Chem. Nat. Compd. (Engl. Transl.), 1965, 1, 63, (Panaxoside)
Kasai, R. et al., Chem. Pharm. Bull., 1976, 24, 400; 1983, 31, 2120, (合成法, Ginsenoside Rs_1, Ginsenoside Rs_2)
Besso, H. et al., Chem. Pharm. Bull., 1982, 30, 2380; 4534, (分離)
Koizumi, H. et al., Chem. Pharm. Bull., 1982, 30, 2393, (分離)
Takemoto, T. et al., Yakugaku Zasshi, 1983, 103, 173; 1015; 1984, 104, 1043; 1986, 106, 664; 1987, 107, 355, (Gypenoside)
Matsuura, H. et al., Chem. Pharm. Bull., 1984, 32, 1188, (Ginsenoside Ra_3)
Namba, T. et al., Chem. Pharm. Bull., 1986, 34, 730, (Pseudoginsenoside R_{e1})
Xu, S. et al., Yaoxue Xuebao, 1987, 22, 750; CA, 108, 72123, (Ginsenoside RA_0)
1989, 25, 690, (合成法, Ginsenoside Rh_2)
Yang, Y.W. et al., Huaxue Xuebao, 1994, 52, 234; CA, 120, 299100a, (Ginsenoside Rb_1, H-NMR, C13-NMR)
Anufriev, V.P. et al., Carbohydr. Res., 1997, 304, 179, (Ginsenoside Rg_3)

***RTECS (化学物質毒性データ) ***
生体影響物質　　：医薬品. 変異原物質. 天然物.
健康障害に関するデータ
急性毒性に関するデータ
〈〈試験方法〉〉 LD50 試験(50%致死量試験).
曝露経路　　：腹腔内投与
被験動物　　：げっ歯類-マウス
投与量・期間：410 mg/kg
毒性影響　　：致死量以外に毒性影響に関する報告はない.
参照文献
ARZNAD Arzneimittel-Forschung. 医薬品. Research. (Editio Cantor Verlag, Postfach 1255, W-7960 Aulendorf, Fed. Rep. Ger.) V.1- 1951- [Vol.,頁,年(19-)]25,539,1975

変異原性に関するデータ

〈〈試験方法〉〉 変異原試験-通常の試験法.

曝露経路　　：腹腔内投与

試験系　　：げっ歯類-ラット.

投与量・期間：50 mg/kg

参照文献

CPBTAL Chemical and Pharmaceutical Bulletin. (Japan Pub. Trading Co., USA, 1255 Howard St., San Francisco, CA 94103) V.6- 1958- [Vol.,頁,年(19-)]24,2400,1976

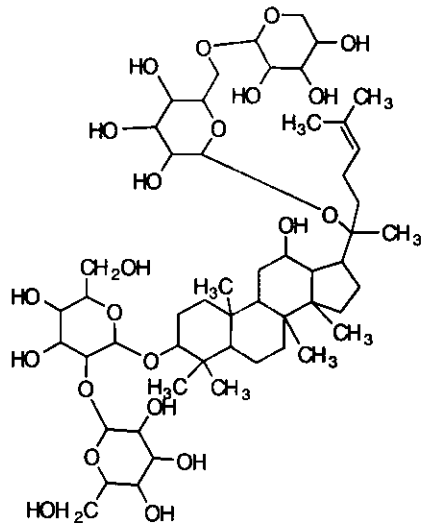
§ Dammar-24-ene-3,12,20-triol; (3 β,12 β,20*S*)-form, 3-*O*-[β-D-Glucopyranosyl-(1 → 2)-β-D-glucopyranoside]20-*O*-[α-L-arabinopyranosyl-(1 → 6)-β-D-glucopyranoside]

[化学名・別名]Ginsenoside Rb_2

[CAS No.]11021-13-9

[化合物分類]テルペノイド(Dammarane triterpenoid)

[構造式]



[分子式]$C_{53}H_{90}O_{22}$

[分子量]1079.281

[正確な分子量]1078.59238

[基原]*Panax ginseng*

[性状]粉末

[融点]Mp 200-203 ℃

[比旋光度]:$[\alpha]_D^{22}$ +3 (c, 1 in MEOH)

[化学物質毒性データ総覧(RTECS)登録番号]LY9536100

----------文献----------

Uvarova, N.I. et al., Khim. Prir. Soedin., 1965, 1, 82; Chem. Nat. Compd. (Engl. Transl.), 1965, 1, 63, (Panaxoside)

Kasai, R. et al., Chem. Pharm. Bull., 1976, 24, 400; 1983, 31, 2120, (合成法, Ginsenoside Rs_1, Ginsenoside Rs_2)

Matsuura, H. et al., Chem. Pharm. Bull., 1983, 31, 2281, (Notoginsenoside R_4)

Matsuura, H. et al., Chem. Pharm. Bull., 1984, 32, 1188, (Ginsenoside Ra_3)

Namba, T. et al., Chem. Pharm. Bull., 1986, 34, 730, (Pseudoginsenoside R_{c1})

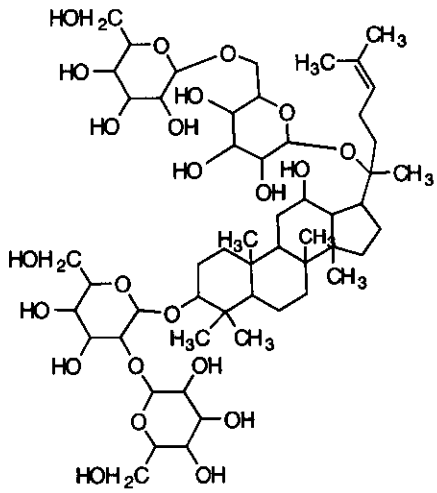
1989, 25, 690, (合成法, Ginsenoside Rh_2)

Yang, Y.W. et al., Huaxue Xuebao, 1994, 52, 234; CA, 120, 299100a, (Ginsenoside Rb_1, H-NMR, C13-NMR)

Anufriev, V.P. et al., Carbohydr. Res., 1997, 304, 179, (Ginsenoside Rg_3)

§ Dammar-24-ene-3,12,20-triol; (3 β,12 β,20*S*)-form, 3-*O*-[β-D-Glucopyranosyl-(1 → 2)-β-D-glucopyranoside]20-*O*-[β-D-glucopyranosyl-(1 → 6)-β-D-glucopyranoside]

[化学名・別名]Ginsenoside Rb_1. Sanchinoside E_1. Gypenoside III. Gynosaponin C
[CAS No.]41753-43-9
[化合物分類]テルペノイド(Dammarane triterpenoid)
[構造式]



[分子式]$C_{54}H_{92}O_{23}$
[分子量]1109.307
[正確な分子量]1108.602945
[基原]*Panax ginseng*
[性状]粉末
[融点]Mp 197-198 ℃
[比旋光度]:$[\alpha]_D^{22}$ +12.4 (c, 0.9 in $CHCl_3$)
[傷害・毒性]50 %致死量(LD_{50})(マウス, 腹腔内投与) 1110 mg/kg; BERDY HAZD : 50 %致死量(LD_{50})(マウス, 腹腔内投与) 637 mg/kg
[化学物質毒性データ総覧(RTECS)登録番号]LZ5856000

----------文献----------

Uvarova, N.I. et al., Khim. Prir. Soedin., 1965, 1, 82; Chem. Nat. Compd. (Engl. Transl.), 1965, 1, 63,)
Yang, Y.W. et al., Huaxue Xuebao, 1994, 52, 234; CA, 120, 299100a, (Ginsenoside Rb_1, H-, C13-NMR)
Takemoto, T. et al., Yakugaku Zasshi, 1983, 103, 173; 1015; 1984, 104, 1043; 1986, 106, 664; 1987, 107, 355, (Gypenoside)

***RTECS (化学物質毒性データ) ***

生体影響物質　　: 医薬品. 変異原物質. 天然物.

健康障害に関するデータ

急性毒性に関するデータ

〈〈試験方法〉〉 LD50 試験(50%致死量試験).
曝露経路　　: 腹腔内投与
被験動物　　: げっ歯類-マウス
投与量・期間 : 1110 mg/kg
毒性影響　　: 致死量以外に毒性影響に関する報告はない.
参照文献

ARZNAD Arzneimittel-Forschung. 医薬品. Research. (Editio Cantor Verlag, Postfach 1255, W-7960 Aulendorf, Fed. Rep. Ger.) V.1- 1951- [Vol.,頁,年(19-)]25,343,1975

〈〈試験方法〉〉 LD50 試験(50%致死量試験).
曝露経路　　: 静脈注射
被験動物　　: げっ歯類-マウス
投与量・期間 : 243 mg/kg
毒性影響　　: 致死量以外に毒性影響に関する報告はない.
参照文献

SYHJAM Saengyak Hakhoechi. Journal of the Society of Pharmacognosy. (Hanguk Saengyak Hakhoe, c/o Natural Products Institute, Seoul National Univ., 28 Yunkeon-Dong, Chong-ro-ku, Seoul 110, Korea) 1970- [Vol.,頁,年(19-)]10,61,1979

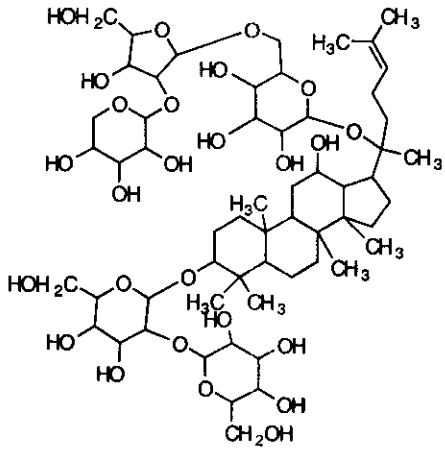
変異原性に関するデータ

〈〈試験方法〉〉 変異原試験-通常の試験法.
曝露経路　　: 腹腔内投与
試験系　　: げっ歯類-ラット.
投与量・期間 : 50 mg/kg
参照文献

CPBTAL Chemical and Pharmaceutical Bulletin. (Japan Pub. Trading Co., USA, 1255 Howard St., San Francisco, CA 94103) V.6- 1958- [Vol.,頁,年(19-)]24,2400,1976

§ Dammar-24-ene-3,12,20-triol; (3 β,12 β,20*S*)-form, 3-*O*-[β-D-Glucopyranosyl-(1 → 2)-β

-D-glucopyranoside]20-*O*-[β-D-xylopyranosyl-(1 → 2)-α-L-arabinofuranosyl-(1 → 6)-β-D-glucopyranoside]



[化学名・別名]Ginsenoside Ra_2
[CAS No.]83459-42-1
[化合物分類]テルペノイド(Dammarane triterpenoid)
[構造式]

[分子式]$C_{58}H_{98}O_{26}$
[分子量]1211.397
[正確な分子量]1210.63464
[基原]*Panax ginseng* の根
[性状]粉末
[比旋光度]:$[\alpha]_D^{25}$ -2.4 (c, 1.0 in MeOH)

----------文献----------

Uvarova, N.I. et al., Khim. Prir. Soedin., 1965, 1, 82; Chem. Nat. Compd. (Engl. Transl.), 1965, 1, 63, (Panaxoside)

Elyakov, C.-B. et al., Khim. Prir. Soedin., 1967, 3, 164; Chem. Nat. Compd. (Engl. Transl.), 1967, 3, 135, (Panaxoside)

Kasai, R. et al., Chem. Pharm. Bull., 1976, 24, 400; 1983, 31, 2120, (合成法, Ginsenoside Rs_1, Ginsenoside Rs_2)

Takemoto, T. et al., Yakugaku Zasshi, 1983, 103, 173; 1015; 1984, 104, 1043; 1986, 106, 664; 1987, 107, 355, (Gypenoside)

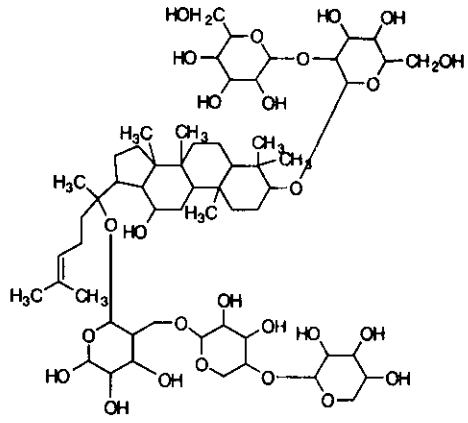
Xu, S. et al., Yaoxue Xuebao, 1987, 22, 750; CA, 108, 72123, (Ginsenoside RA_6)

Yoshikawa, K. et al., Chem. Pharm. Bull., 1989, 37, 852, (Gypenoside)
1989, 25, 690, (合成法, Ginsenoside Rh_2)

Yang, Y.W. et al., Huaxue Xuebao, 1994, 52, 234; CA, 120, 299100a, (Ginsenoside Rb_1, H-NMR, C13-NMR)

Anufriev, V.P. et al., Carbohydr. Res., 1997, 304, 179, (Ginsenoside Rg_3)

§ Dammar-24-ene-3,12,20-triol; (3β,12β,20*S*)-form, 3-*O*-[β-D-Glucopyranosyl-(1 → 2)-β-D-glucopyranoside]20-*O*-[β-D-xylopyranosyl-(1 → 4)-α-L-arabinopyranosyl-(1 → 6)-β-D-glucopyranoside]



[化学名・別名]Ginsenoside Ra_1
[CAS No.]83459-41-0
[化合物分類]テルペノイド(Dammarane triterpenoid)
[構造式]

[分子式]$C_{58}H_{98}O_{26}$
[分子量]1211.397
[正確な分子量]1210.63464
[基原]*Panax ginseng* の根
[性状]粉末
[比旋光度]:$[\alpha]_D^{25}$ +12.8 (c, 1.0 in MeOH)

----------文献----------

Uvarova, N.I. et al., Khim. Prir. Soedin., 1965, 1, 82; Chem. Nat. Compd. (Engl. Transl.), 1965, 1, 63, (Panaxoside)

Elyakov, C.-B. et al., Khim. Prir. Soedin., 1967, 3, 164; Chem. Nat. Compd. (Engl. Transl.), 1967, 3, 135, (Panaxoside)

Nagai, M. et al., Tet. Lett., 1967, 3579, (分離)

Lin, T.D. et al., Chem. Pharm. Bull., 1976, 24, 253, (分離)

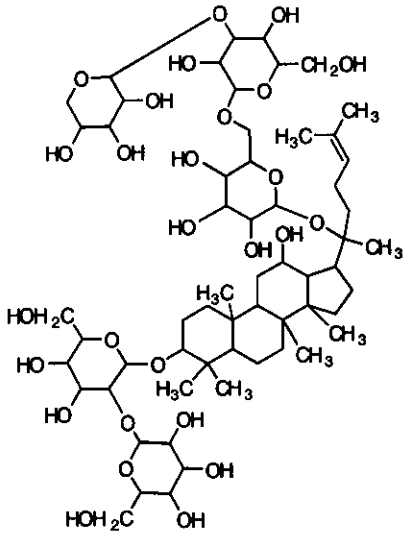
Kasai, R. et al., Chem. Pharm. Bull., 1976, 24, 400; 1983, 31, 2120, (合成法, Ginsenoside Rs_1, Ginsenoside Rs_2)

Yahara, S. et al., Chem. Pharm. Bull., 1976, 24, 2204, (Ginsenoside F_2)

Yang, T.R. et al., Phytochemistry, 1983, 22, 1473, (Notoginsenoside)
Takemoto, T. et al., Yakugaku Zasshi, 1983, 103, 173; 1015; 1984, 104, 1043; 1986, 106, 664; 1987, 107, 355, (Gypenoside)
Matsuura, H. et al., Chem. Pharm. Bull., 1984, 32, 1188, (Ginsenoside Ra_3)
Xu, S. et al., Yaoxue Xuebao, 1987, 22, 750; CA, 108, 72123, (Ginsenoside RA_0)
Yoshikawa, K. et al., Chem. Pharm. Bull., 1989, 37, 852, (Gypenoside)
Atopkina, L.N. et al., Khim. Prir. Soedin., 1989, 25, 813; Chem. Nat. Compd. (Engl. Transl.), 1989, 25, 690, (合成法, Ginsenoside Rh_2)
Martindale, The Extra Pharmacopoeia, 30th edn., Pharmaceutical Press, 1993, 1372
Yang, Y.W. et al., Huaxue Xuebao, 1994, 52, 234; CA, 120, 299100a, (Ginsenoside Rb_1, H-NMR, C13-NMR)
Anufriev, V.P. et al., Carbohydr. Res., 1997, 304, 179, (Ginsenoside Rg_3)
Ma, W.G. et al., Phytochemistry, 1999, 52, 1133, (Panax notoginseng saponin)

§ Dammar-24-ene-3,12,20-triol; (3 β,12 β,20*S*)-form, 3-*O*-[β-D-Glucopyranosyl-(1 → 2)-β-D-glucopyranoside]20-*O*-[β-D-xylopyranosyl-(1 → 3)-β-D-glucopyranosyl-(1 → 6)-β-D-glucopyranoside]

[化学名・別名]Ginsenoside Ra_3
[CAS No.]90985-77-6
[化合物分類]テルペノイド(Dammarane triterpenoid)
[構造式]



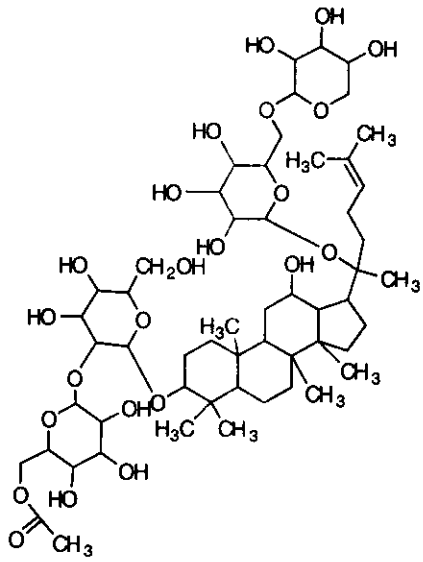
[分子式]$C_{59}H_{100}O_{27}$
[分子量]1241.423
[正確な分子量]1240.645205
[基原]次の植物から分離:*Panax ginseng*
[性状]粉末・四水和物
[比旋光度]:$[\alpha]_D^{17}$ +9.8 (c, 0.43 in MeOH)

----------文献----------

Matsuura, H. et al., Chem. Pharm. Bull., 1984, 32, 1188, (Ginsenoside Ra_3)

§ Dammar-24-ene-3,12,20-triol; (3 β,12 β,20*S*)-form, 3-*O*-[6-*O*-Acetyl-β-D-glucopyranosyl-(1 → 2)-β-D-glucopyranoside]20-*O*-[α-L-arabinopyranosyl-(1 → 6)-β-D-glucopyranoside]

[化学名・別名]Ginsenoside Rs_1
[CAS No.]87733-67-3
[化合物分類]テルペノイド(Dammarane triterpenoid)
[構造式]

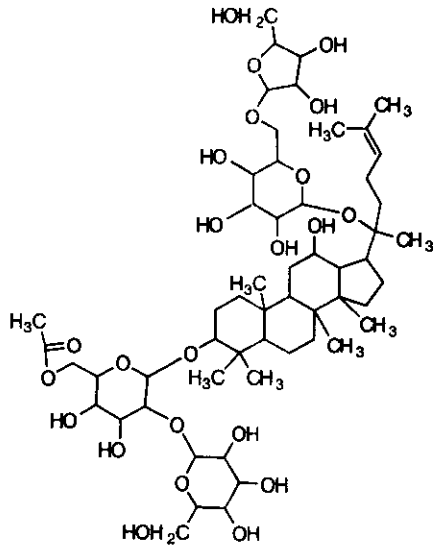


[分子式]$C_{55}H_{92}O_{23}$
[分子量]1121.318
[正確な分子量]1120.602945
[基原]次の植物から分離:*Panax ginseng*
[性状]粉末・二水和物
[比旋光度]:$[\alpha]_D^{16}$ +19 (c, 1 in MeOH)

----------文献----------

Kasai, R. et al., Chem. Pharm. Bull., 1976, 24, 400; 1983, 31, 2120, (合成法, Ginsenoside Rs_1, Ginsenoside Rs_2)

§ Dammar-24-ene-3,12,20-triol; (3 β,12 β,20*S*)-form, 3-*O*-[β-D-Glucopyranosyl-(1 → 6)-6-*O*-acetyl-β-D-glucopyranoside] 20-*O*-[α-L-arabinofuranosyl-(1 → 6)-β-D-glucopyranoside]
[化学名・別名]Ginsenoside Rs_2
[CAS No.]87733-66-2
[化合物分類]テルペノイド(Dammarane triterpenoid)
[構造式]



[分子式]$C_{55}H_{92}O_{23}$
[分子量]1121.318
[正確な分子量]1120.602945
[基原]次の植物から分離:*Panax ginseng*
[性状]粉末・二水和物
[比旋光度]:$[\alpha]_D^{16}$ +2.5 (c, 1 in MeOH)

----------文献----------

Kasai, R. et al., Chem. Pharm. Bull., 1976, 24, 400; 1983, 31, 2120, (合成法, Ginsenoside Rs_1, Ginsenoside Rs_2)

§ Dammar-24-ene-3,12,20-triol; (3 β,12 β,20*S*)-form, Glycoside (1)

[化学名・別名]Panaxoside D
[化合物分類]テルペノイド(Dammarane triterpenoid)テルペノイド(Terpenoids 構造は未知)
[構造式]有効な構造式はない
[基原]次の植物から分離:*Panax ginseng*
[性状]黄色がかった粉末 (EtOH/Me_2CO)
[融点]Mp 157-160 ℃
[比旋光度]:[α]$_D^{20}$ +29 (c, 4.82 in MeOH)
[その他のデータ]構造は未知.

----------文献----------

Uvarova, N.I. et al., Khim. Prir. Soedin., 1965, 1, 82; Chem. Nat. Compd. (Engl. Transl.), 1965, 1, 63, (Panaxoside)
Elyakov, C.-B. et al., Khim. Prir. Soedin., 1967, 3, 164; Chem. Nat. Compd. (Engl. Transl.), 1967, 3, 135, (Panaxoside)

§ Dammar-24-ene-3,12,20-triol (3 β,12 β,20*S*)-form, Glycoside (2)
[化学名・別名]Panaxoside E
[化合物分類]テルペノイド(Terpenoids 構造は未知), テルペノイド(Dammarane triterpenoid)
[構造式]有効な構造式はない
[基原]*Panax ginseng*
[融点]Mp 185-187 ℃
[比旋光度]:[α]$_D$ +21.5 (c, 4.18 in MeOH)
[その他のデータ]構造は未知.

----------文献----------

Uvarova, N.I. et al., Khim. Prir. Soedin., 1965, 1, 82; Chem. Nat. Compd. (Engl. Transl.), 1965, 1, 63, (Panaxoside)
Elyakov, C.-B. et al., Khim. Prir. Soedin., 1967, 3, 164; Chem. Nat. Compd. (Engl. Transl.), 1967, 3, 135, (Panaxoside)

§ Dammar-24-ene-3,12,20-triol; (3 β,12 β,20*S*)-form, Glycoside (3)
[化学名・別名]Panaxoside F
[化合物分類]テルペノイド(Terpenoids 構造は未知), テルペノイド(Dammarane triterpenoid)
[構造式]有効な構造式はない
[基原]*Panax ginseng* から得られる配糖体
[融点]Mp 185-187 ℃
[比旋光度]:[α]$_D^{20}$ +20.6 (c, 5.34 in MeOH)
[その他のデータ]構造は未知.

----------文献----------

Uvarova, N.I. et al., Khim. Prir. Soedin., 1965, 1, 82; Chem. Nat. Compd. (Engl. Transl.), 1965, 1, 63, (Panaxoside)
Elyakov, C.-B. et al., Khim. Prir. Soedin., 1967, 3, 164; Chem. Nat. Compd. (Engl. Transl.), 1967, 3, 135, (Panaxoside)
Nagai, M. et al., Tet. Lett., 1967, 3579, (分離)

§ 2,6-Di-*tert*-butyl-1,4-benzenediol
[化学名・別名]2,6-Bis(1,1-dimethylethyl)-1,4-benzenediol(CAS 名). 2,6-Di-tert-butylhydroquinone
[CAS No.]2444-28-2
[化合物分類]単環芳香族(Hydroquinone), 単環芳香族(Simple phenol),
[構造式]
[分子式]$C_{14}H_{22}O_2$
[分子量]222.327
[正確な分子量]222.16198
[基原]*Panax ginseng* の根
[用途]抗酸化剤
[性状]結晶(petrol)
[融点]Mp 117-118 ℃