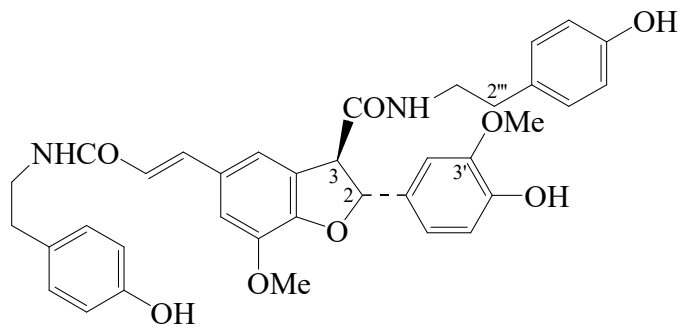
>>**Entry Name: Grossamide**



CAS Registry Number: 80510-06-1

Molecular Formula: $C_{36}H_{36}N_2O_8$
Molecular Weight: 624.689
Accurate Mass: 624.247168
Percentage Composition: C 69.22%; H 5.81%; N 4.48%; O 20.49%
Biological Source: Isol. from *Cannabis sativa* and *Capsicum annuum* var. *grossum* and *Hibiscus cannabinus*
Use/Importance: Protease inhibitor
Physical Description: Cryst. (MeOH/$CHCl_3$/cyclohexane)
Melting Point: Mp 174-175° (133-135°)

>>**Derivative:** 3'-*O*-De-Me
Synonym(s): Demethylgrossamide

CAS Registry Number: 170171-94-5

Molecular Formula: $C_{35}H_{34}N_2O_8$
Molecular Weight: 610.662
Accurate Mass: 610.231518
Percentage Composition: C 68.84%; H 5.61%; N 4.59%; O 20.96%

Physical Description: Amorph. powder

>>**Derivative:** 2-Epimer
Synonym(s): Tribulusamide A

Molecular Formula: $C_{36}H_{36}N_2O_8$
Molecular Weight: 624.689
Accurate Mass: 624.247168
Percentage Composition: C 69.22%; H 5.81%; N 4.48%; O 20.49%
Biological Source: Alkaloid from the fruit of *Tribulus terrestris*
Biological Use/Importance: Hepatoprotective agent
Physical Description: Amorph. solid
Optical Rotation: $[\alpha]_D^{25}$–10.9 (c, 0.1 in MeOH)
UV: [neutral] λ_{max} 220 (log ε 4.22); 287 (log ε 4.01); 340 (log ε 4.07) (MeOH)

>>**Derivative:** 2-Epimer, 2'''-oxo
Synonym(s): Tribulusamide B

Molecular Formula: $C_{36}H_{34}N_2O_9$
Molecular Weight: 638.673
Accurate Mass: 638.226433
Percentage Composition: C 67.70%; H 5.37%; N 4.39%; O 22.55%
Biological Source: Alkaloid from the fruit of *Tribulus terrestris*
Biological Use/Importance: Hepatoprotective agent
Physical Description: Amorph. solid
Optical Rotation: $[\alpha]_D^{25}$–4.9 (c, 0.2 in MeOH)
UV: [neutral] λ_{max} 220 (log ε 4.38); 285 (log ε 4.32); 320 (log ε 4.18) (MeOH)

References:

Yoshihara, T. *et al.*, *Agric. Biol. Chem.*, 1981, **45**, 2593; 1983, **47**, 217, *(isol, synth, struct)*
Sakakibara, I. *et al.*, *Phytochemistry*, 1991, **30**, 3013-3016, *(isol)*
Lajide, L. *et al.*, *Phytochemistry*, 1995, **40**, 1105-1112, *(Demethylgrossamide)*
Li, J.-X. *et al.*, *Planta Med.*, 1998, **64**, 628-631, *(Tribulusamides)*
Seca, A.M.L. *et al.*, *Phytochemistry*, 2001, **58**, 1219-1223, *(isol, pmr, cmr)*