

Product Data Sheet

Product Name: Glaucocalyxin B

Cat. No.: GC33085

Chemical Properties

Cas. No. 80508-81-2

SMILES CC1(C)C(CC[C@@]2(C)[C@@]3([H])[C@@]4(C(C([C@H](CC3)[C@H]4OC(C)=O)=C)=O)[C@H](O)C[C@]12[H])=O

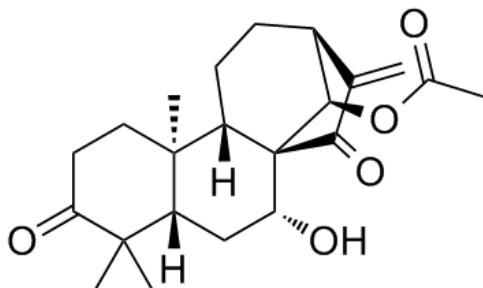
Formula $C_{22}H_{30}O_5$ M.Wt 374.47

Solubility Soluble in DMSO Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Protocol

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

Cell experiment: The microglia cells viability is assessed by MTT assay. Cells are seeded in 96-well plates at the density of 5×10^4 cells/well. The cell culture supernatant is discarded after treatment with various agents, and then 30 μ L of MTT (0.5 mg/mL) solution is added into each well. After incubation for 4 h at 37 °C, 100 μ L of DMSO is added into each well to dissolve the formazan dye, and then the absorbance of solubilized formazan is measured by microplate reader[3].

References:

- [1]. Yang WH, et al. Glaucoalyxin A and B-induced cell death is related to GSH perturbation in human leukemia HL-60 cells. *Anticancer Agents Med Chem.* 2013 Oct;13(8):1280-90.
- [2]. Pan Y, et al. Glaucoalyxin B induces apoptosis and autophagy in human cervical cancer cells. *Mol Med Rep.* 2016 Aug;14(2):1751-5.
- [3]. Gan P, et al. Anti-inflammatory effects of glaucoalyxin B in microglia cells. *J Pharmacol Sci.* 2015 May;128(1):35-46.

Background

Glaucoalyxin B is an ent kaurane diterpenoid isolated from the Chinese traditional medicine *Rabdosia japonica* with anticancer and antitumor activity; decreases the growth of HL-60 cells with an IC₅₀ of approximately 5.86 μ M at 24 h.

Glaucoalyxin A (GlnA) and (GlnB) dose-dependently decrease the growth of HL-60 cells with an IC₅₀ of approximately 6.15 and 5.86 μ M at 24 h, respectively. Both Gln A and B could induce apoptosis, G2/M-phase cycle arrest, DNA damage and the accumulation of reactive oxygen species (ROS) in HL-60 cells[1]. GlnB inhibits the proliferation of human cervical cancer cells in vitro through the induction of apoptosis and autophagy, which may be mediated by the phosphatidylinositol 4,5 bisphosphate 3 kinase/Akt signaling pathway. Treatment with GlnB inhibits the proliferation of HeLa and SiHa cervical cancer cell lines in a dose dependent manner. GlnB increases the apoptotic cell population of and enhanced poly (ADP ribose) polymerase 1 cleavage. GlnB also induces increased light chain 3 II/I protein cleavage, indicating the induction of autophagy. GlnB treatment increases the expression of phosphatase and tensin homolog and decreases the expression of phosphorylated protein kinase B[2]. Glaucoalyxin B (GLB), one of five ent-kauranoid diterpenoids, significantly

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

decreased the generation of nitric oxide (NO), tumor necrosis factor (TNF)- α , interleukin (IL)-1 β , cyclooxygenase (COX)-2 and inducible nitric oxide synthase (iNOS) in the lipopolysaccharide (LPS)-activated microglia cells[3].

[1]. Yang WH, et al. Glaucocalyxin A and B-induced cell death is related to GSH perturbation in human leukemia HL-60 cells. *Anticancer Agents Med Chem.* 2013 Oct;13(8):1280-90. [2]. Pan Y, et al. Glaucocalyxin B induces apoptosis and autophagy in human cervical cancer cells. *Mol Med Rep.* 2016 Aug;14(2):1751-5. [3]. Gan P, et al. Anti-inflammatory effects of glaucocalyxin B in microglia cells. *J Pharmacol Sci.* 2015 May;128(1):35-46.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA