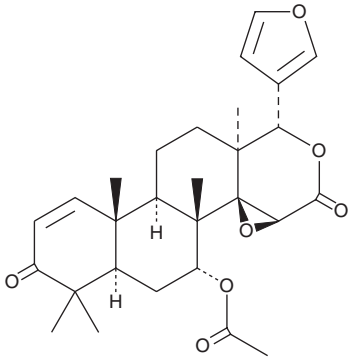
PRODUCT INFORMATION

Gedunin

Item No. 17328

CAS Registry No.:	2753-30-2
Formal Name:	(1S,3aS,4aR,4bS,5R,6aR,10aR,10bR,12aS)-5-(acetyloxy)-1-(3-furanyl)-1,5,6,6a,7,10a,10b,11,12,12a-decahydro-4b,7,7,10a,12a-pentamethyl-oxireno[c]phenanthro[1,2-d]pyran-3,8(3aH,4bH)-dione
Synonym:	NSC 113497
MF:	$C_{28}H_{34}O_7$
FW:	482.6
Purity:	≥98%
UV/Vis.:	λ_{max}: 220 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Gedunin is supplied as a crystalline solid. A stock solution may be made by dissolving the gedunin in the solvent of choice. Gedunin is soluble in organic solvents such as ethanol, methanol, and acetonitrile, which should be purged with an inert gas. The solubility of gedunin in these solvents is approximately 1 mg/ml.

Description

Gedunin is a natural inhibitor of the heat shock protein (HSP90; Item Nos. 22734 | 22735) co-chaperone p23 that also inhibits HSP90 expression in human teratocarcinomal NTERA-2 cells *in vitro* at 5 µg/ml.[1] This tetranortriterpenoid, which is isolated from *A. indica*, binds to and blocks the chaperone activity of p23 to induce apoptosis in HeLa-PR_B cells *in vitro* at a concentration of 20 µM.[2] Gedunin inhibits breast cancer cell proliferation *in vitro*, with IC_{50} values of 8.84 and 3.22 µM in MCF-7 and SKBr-3 cells, respectively, and inhibits the growth of PANC-1 pancreatic cancer cells (IC_{50} = 25 µM) by targeting the sonic hedgehog pathway to induce apoptosis.[3,4] It also exerts anti-inflammatory effects *in vivo*. In a mouse model of articular inflammation induced by zymosan (Item No. 21175), gedunin (0.05-0.5 mg/kg, i.p.) reduces edema formation and the production of inflammatory cytokines.[5] Gedunin (0.5 mg/kg) also inhibits the pleural accumulation of eosinophils and activated T lymphocytes in an ovalbumin-sensitized mouse model of allergic inflammation when administered prior to ovalbumin rechallenge.[6] It also targets the lipopolysaccharide binding site and thus blocks Toll-like receptor 4 (TLR4) signaling in macrophages *in vitro* at a concentration of 10 µM.[7]

References

1. Tharmarajah, L., Samarakoon, S.R., Ediriweera, M.K., *et al. Biomed. Res. Int.* **2017**, 2413197 (2017).
2. Patwardhan, C.A., Fauq, A., Peterson, L.B., *et al. J. Biol. Chem.* **288(10)**, 7313-7325 (2013).
3. Brandt, G.E.L., Schmidt, M.D., Prisinzano, T.E., *et al. J. Med. Chem.* **51(20)**, 6495-6502 (2008).
4. Subramani, R., Gonzalez, E., Nandy, S.B., *et al. Oncotarget* **8(7)**, 10891-10904 (2017).
5. Conte, F.P., Kerraris, F.K., Costa, T.E.M.M., *et al. Molecules* **20(2)**, 2636-2657 (2015).
6. Ferraris, F.K., Moret, K.H., Figueiredo, A.B.C., *et al. Int. Immunopharmacol.* **14(1)**, 82-93 (2012).
7. Borges, P.V., Moret, K.H., Maya-Monteiro, C.M., *et al. Mol. Pharm.* **88(5)**, 949-961

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM