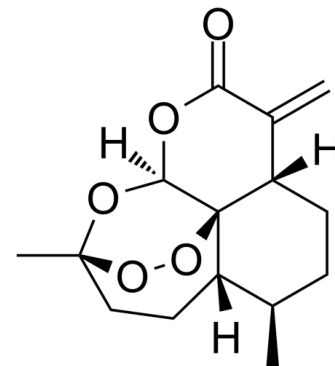


Data Sheet

Product Name:	Artemisitene
Cat. No.:	CS-0086678
CAS No.:	101020-89-7
Molecular Formula:	C ₁₅ H ₂₀ O ₅
Molecular Weight:	280.32
Target:	Apoptosis; Keap1-Nrf2; Topoisomerase
Pathway:	Apoptosis; Cell Cycle/DNA Damage; NF-κB
Solubility:	DMSO : ≥ 100 mg/mL (356.74 mM)



BIOLOGICAL ACTIVITY:

Artemisitene, a natural derivative of Artemisinin, is a **Nrf2** activator with antioxidant and anticancer activities. Artemisitene activates Nrf2 by decreasing Nrf2 ubiquitination and increasing its stability^{[1][2]}. **In Vitro:** Artemisitene selectively induces DNA double-stranded breaks (DSBs) and apoptosis in various human cancer cells by suppressing the expression of topoisomerases in human cancer cells. Artemisitene selectively destabilizes c-Myc in human cancer cells by promoting the ubiquitination of c-Myc through the specific induction of the c-Myc E3 ligase NEDD4^[2]. **In Vivo:** In Nrf2 wild-type mice, systemic administration of Artemisitene (5-10 mg/kg; i.p.) strongly inhibits bleomycin-induced lung damage^[1].

References:

[1]. Weimin Chen, et al. Artemisitene activates the Nrf2-dependent antioxidant response and protects against bleomycin-induced lung injury. *FASEB J.* 2016 Jul;30(7):2500-10.

[2]. Jian Chen, et al. Artemisitene suppresses tumorigenesis by inducing DNA damage through deregulating c-Myc-topoisomerase pathway. *Oncogene.* 2018 Sep;37(37):5079-5087.

CAIndexNames:

3,12-Epoxy-12H-pyrano[4,3-j]-1,2-benzodioxepin-10(3H)-one, octahydro-3,6-dimethyl-9-methylene-, (3R,5aS,6R,8aS,12S,12aR)-

SMILES:

C=C1[C@@](CC[C@H]2C)([H])[C@@]([C@@]2([H])CC3)(OO4)[C@@](OC1=O)([H])O[C@@]34C

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

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