Verteporfin

货号：V2195

储存条件：粉末-20°C 可保存 3 年；液体-80°C 可保存 12 月。

产品描述

Yes Associated Protein (YAP) is a downstream nuclear effector of the Hippo signaling pathway which plays a critical role in cell proliferation, apoptosis and angiogenesis as well as a potential target for cancer treatment. Verteporfin, a member of the porphyrin family, is clinically used in the treatment of neovascular macular degeneration with IC50 value of 1.0μM~10μM, varying in different cell types. Verteporfin is always used in photodynamic therapy as photosensitizer and in the Hippo-YAP pathway as inhibitor. As reported, verteporfin could suppress the proliferation of human PDAC PANC-1 and SW1990 cells, and induce apoptosis in dose- and time-dependent manners. Treatment with verteporfin inhibited the tumor growth on the PDAC xenograft model as well as downregulated cyclinD1 and cyclinE1, modulate of Bcl-2 family proteins and activate PARP. In addition, Verteporfn exhibited distinct inhibitory effect on the proliferation of four lines of Uveal melanoma cells (e.g., 92.1, Mel 270, Omm 1 and Omm 2.3), and induced apoptosis through the intrinsic pathway. According to a Phase I/II study of verteporfin photodynamic therapy, 12 mm lesions were seen consistently at 40 J, but with considerable variation in necrosis volume (mean volume 3.5 cm(3) at 40 J). Minor, self-limiting extrapancreatic effects were seen in multifibre patients. No adverse interactions were seen in patients given chemotherapy or radiotherapy before or after PDT. After PDT, one patient underwent an R0 Whipple's pancreaticoduodenectomy.

作用机制

Verteporfin is transported in the plasma primarily by lipoproteins and once been activated by light in the presence of oxygen, highly reactive, short-lived singlet oxygen and reactive oxygen radicals are generated. Light activation of verteporfin can locally damage neovascular endothelium, resulting in vessel occlusion. Damaged endothelium is known to release procoagulant and vasoactive factors through the lipo-oxygenase (leukotriene) and cyclo-oxygenase (eicosanoids such as thromboxane) pathways, resulting in platelet aggregation, fibrin clot formation and vasoconstriction. Verteporfin appears to somewhat preferentially accumulate in neovasculature, including choroidal neovasculature. However, animal models indicate that the drug is also present in the retina. As singlet oxygen and reactive oxygen radicals are cytotoxic, Verteporfin can also be used to destroy tumor cells.

储存液制备	质量	1 mg	5 mg	10 mg
	1 mM	1.3912 mL	6.9561 mL	13.9123 mL
	5 mM	0.2782 mL	1.3912 mL	2.7825 mL
	10 mM	0.1391 mL	0.6956 mL	1.3912 mL

产品信息

CAS 号	129497-78-5	
分子式	C41H42N4O8	
分子量	718.79	
溶解度	DMSO	53.0 mg/mL (73.7 mM)
	Water	insoluble