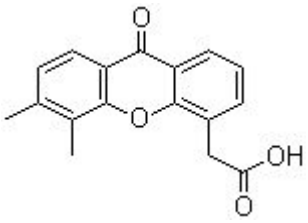
Product Introduction

DMXAA (Vadimezan)

DMXAA (Vadimezan) is a **vascular disrupting agents (VDA)** and competitive inhibitor of DT-diaphorase with K_I of 20 μM and **IC50** of 62.5 μM, respectively. Phase 3.

Technical Data:

Molecular Weight (MW):	282.29	
Formula:	$C_{17}H_{14}O_4$	
Solubility (25°C) * <1 mg/ml means slightly soluble or insoluble:	DMSO 7 mg/mL	
	Water <1 mg/mL	
	Ethanol <1 mg/mL	
Purity:	>98%	
Storage:	3 years -20℃Powder	
	6 months-80℃in DMSO	
CAS No.:	117570-53-3	

Biological Activity

In DLD-1 human colon carcinoma cells, DMXAA inhibits DT-diaphorase activity without significant effects on the activity of cytochrome b5 reductase and cytochrome P450 reductase. Combination of menadione and DMXAA leads to an increase in the antiproliferative activity of DLD-1 cells. [1] DMXAA, as an antiviral agent, inhibits VSV-induced cytotoxicity and influenza virus replication in RAW 264.7 macrophages. [2] A recent study shows that DMXAA has non-immune-mediated inhibitory effects against several kinase members of VEGFR (vascular endothelial growth factor receptor), such as VEGFR2 signalling in human

umbilical vein endothelial cells. [3]

DMXAA treatment significantly protects C57BL/6J mice infected i.n. with 200 p.f.u. mouse-adapted H1N1 influenza PR8 virus with 60% survival, while the control group only exhibited 20% survival. [2] DMXAA significantly delays tumor growth induced by chemical carcinogen, increases the time to tumor doubling and increases time from treatment to euthanasia. After the treatment of DMXAA, median tumor doubling time, median tumour tripling time and median time from treatment to euthanasia in tumor-bearing animals are increased by approximately 4.4-, 1.8- and 2.7-fold, respectively. [4]

References

[1] Phillips RM. Biochem Pharmacol. 1999, 58(2), 303-310.

[2] Shirey KA, et al. J Leukoc Biol. 2011, 89(3), 351-357.

[3] Buchanan CM, et al. Clin Sci (Lond). 2012, 122(10), 449-457.

[4] Liu JJ, et al. Cancer Chemother Pharmacol. 2007, 59(5), 661-669.

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